CITY OF PORT WENTWORTH

ZONING BOARD OF APPEALS

MARCH 3, 2025

Council Meeting Room	Regular Session	3:00 PM

7224 GA HIGHWAY 21
PORT WENTWORTH, GA 31407

1. **CALL MEETING TO ORDER**
2. **PRAYER AND PLEDGE OF ALLEGIANCE**
3. **ROLL CALL - CLERK OF COUNCIL**
4. **APPROVAL OF AGENDA**
5. **ADOPTION OF MINUTES**
6. **NEW BUSINESS**

   A. A application has been submitted by Sainamo, LLC for a variance from the minimum required rear building setback, to allow for phased commercial development. PIN # 70037 01053 in the 3rd Council District, located on Old Richmond Road, Port Wentworth, zoned C-2.

7. **ADJOURNMENT**

Zoning Board of Appeals
7224 GA Highway 21
Port Wentworth, GA 31407

SCHEDULED

Meeting: 03/03/25
Department: Development Services
Category: Ordinance
Prepared By: Katie Dunnigan
Department Head: Katie Dunnigan

AGENDA ITEM (ID)

DOC ID:

A application has been submitted by Sainamo, LLC for a variance from the minimum required rear building setback, to allow for phased commercial development. PIN # 70037 01053 in the 3rd Council District, located on Old Richmond Road, Port Wentworth, zoned C-2.

Issue/Item: A application has been submitted by Sainamo, LLC for a variance from the minimum required rear building setback, to allow for phased commercial development. PIN # 70037 01053 in the 3rd Council District, located on Old Richmond Road, Port Wentworth, zoned C-2.

Background: - The applicant wishes to develop the 2nd phase of a commercial plaza. This phase would include multiple units dedicated for restaurant space.
- The intended use of the site is a multi-tenant commercial building, approximately 9,160 square feet.
- The first phase of development was a multi-tenant commercial building, approximately 9,088 square feet. The final site plan was approved in May, 2019 to include encroachment of the current rear setback.
- The proposed site plan for the new phase puts the building approximately 4.5' in to the 15' minimum setback as shown in Table 4.40 of the City of Port Wentworth Code of Ordinances, Zoning Ordinances.

Facts and Finding: - The conditions for approval of a variance are found in the Port Wentworth, Georgia Code of Ordinances, Zoning Ordinances, Section 21.30.C.2 as follows: *Where by reason of the exceptional narrowness, shallowness, or shape of a specific piece of property, or by reason of exceptional topographic conditions, or other extraordinary situation or condition of the land, building, or structure, or of the use or development of property immediately adjoining the property in question, the literal enforcement of the requirements of this ordinance would involve practical difficulties or would cause undue hardship.*
- The proposed building is comparable in size, structure, and setback to the previous approved building in the same plaza.
- The shape and orientation of the site for phase 2 disallow continuity of development due to the lack of depth of the site.
- The rear of the proposed building will abut the parking lot of an adjacent C-2 parking lot.
- The adjacent property provides approximately 27' of landscaping and a detention pond between their parking lot and the shared property line.

Funding: N/A

Recommendation: Approval of the requested variance does not appear to represent a negative impact to the use or aesthetics of surrounding properties or operations. The requested variance allows for consistency across a phased development.

APPLICATION
CITY OF PORT WENTWORTH ZONING BOARD OF APPEALS

Date Filed: 1/28/2025
Project #: _____

The **APPLICATION** and all **SUPPORTING DOCUMENTS** with the **REQUIRED PLOT PLAN** must be submitted to the Department of Development Services.

PLEASE PRINT OR TYPE:

Name of Applicant: Sainamo, LLC

Property Owner (if different from applicant): N/A
****** Authorization of Property Owner Form required if Applicant and property owner is not the same. ******

Property Location: 0 Old Richmond Road (Address/Street Name) 5+5A (Lot Number)

~~Subdivision/Ward:~~ PIN 70037 01053 Zoning District: C-2

NAMES, MAILING ADDRESSES and **PIN #'S** of property owners within 300 feet of the property line. Include those directly across a public right-of-way. Use additional sheet if necessary.

NAME	ADDRESS	PIN #
attached		

REASON FOR APPEAL: Check appropriate section(s).

( ) A decision of the Zoning Administrator which the applicant believes to be contrary to the meaning of the Zoning Ordinance.
( ) An application to establish a use which must be approved by the Board of Appeals.
( ) A request to vary:
- ( ) ____foot ____yard variance
- ( ) ____ lot area variance
- ( ) Fence variance
- ( ) ____ lot width variance
- (✓) ____ setback variance
- ( ) ___% building coverage variance

( ) A request for extension of a non-conforming use.
( ) Other: _____

Describe those things you feel justify the action requested. List specific of the Zoning Ordinance which have a bearing on your request.

The proposed commercial building for this site encroaches approximately 4.5' in to the minimum rear setback.
- The proposed development is a new phase of an existing development with non-conforming approved setbacks which are similar to proposed.
- The size and shape of the site make cohesive phased development unobtainable under current zoning ordinances

Signature of Applicant

499 Old Richmond Rd, PW
Mailing Address of Applicant

912-572-4355
Telephone Number

NMRA1234@gmail.com
Email Address

Total Fees: Administrative Fee + Zoning Board of Appeals Application Fee = Total
(Please refer to the current "Business User Fee Schedule)

Date Paid 1/28/2025

***** Any application not completed in full will not be processed *****

49-50 PORT WENTWORTH LLC & KM, C\
P O BOX 1610
HUNTS VALLEY, MD 21030

CHATHAM-COLDBROOK ASSOCIATES L
PO BOX 20197
ATLANTA, GA 30325

GEORGIA MUNICIPAL ASSOCIATION INC
201 PRYOR STREET
ATLANTA, GA 30303

LIMITLESS HOSPITALITIES, LLC
3937 WOODOATS CIR.
BUFORD, GA 30519

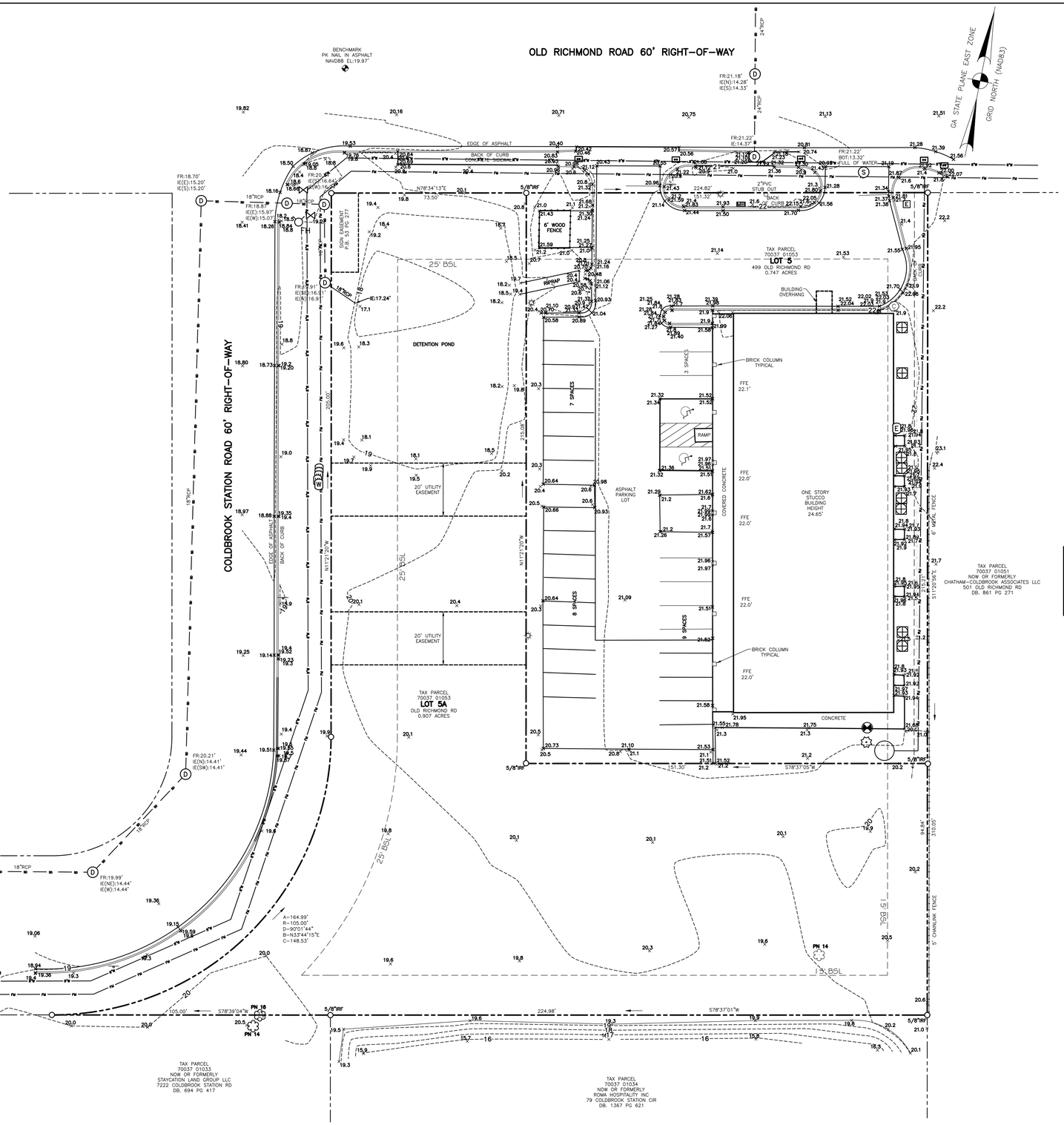
PORT WENTWORTH FEE OWNER LLC
3735 B BEAM ROAD
CHARLOTTE, NC 28217

ROMA HOSPITALITY INC
130 CANAL ST SUITE 101
POOLER, GA 31322

SAINAMO LLC *
243 CLEARWATER CIR
PORT WENTWORTH, GA 31407

SAINAMO, LLC
243 CLEARWATER CIR
PORT WENTWORTH, GA 31407

STAYCATION LAND GROUP LLC
2808 E. COLLEGE AVE
DECATUR, GA 30030



EXISTING SITE PLAN

1" = 20'

LEGEND

NEW	EXISTING	DESCRIPTION
		BUILDING
		RESURFACE ASPHALT PAVEMENT
		ASPHALT PAVEMENT TYPE I
		ASPHALT PAVEMENT TYPE I I
		CONCRETE PAVEMENT
		CONCRETE SIDEWALK
— SD —		STORM DRAIN LINE
— SS —	— SS —	SANITARY SEWER LINE
— W —	— W —	WATER LINE
●	Ⓢ	SANITARY SEWER MANHOLE
	G.V.	GAS VALVE
	W.V.	WATER VALVE
■	W.M.	WATER METER
		FIRE HYDRANT
		SIGN
		FLARED END SECTION
	13.00	SPOT ELEVATION
		CONTOUR
I.E.4.13	I.E.4.13	INVERT ELEVATION
	—X—	CHAIN LINK FENCE
		DITCH INVERT
		PROPERTY LINE
	IPF	IRON PIN FOUND
TW 16.83		TOP OF WALK
TP 14.65		TOP OF PAVEMENT
FG 16.1		FINISHED GRADE
TS 16.10		TOP OF STONE
TG 16.10		TOP OF GUTTER
TC 16.10		TOP OF CURB

FIRE PROTECTION WATER :

AS PER 2018 IBC :
1. RETAIL = M OCCUPANCY (SECTION 309.1)
2. SPRINKLER PROTECTION IS NOT REQUIRED AS PER SECTION 903.2.7.

SITE FIRE PROTECTION NOTES :

1. ACCESS FOR FIREFIGHTING
3310.10 REQUIRED ACCESS.
APPROVED VEHICLE ACCESS FOR FIREFIGHTING SHALL BE PROVIDED TO ALL CONSTRUCTION OR DEMOLITION SITES. VEHICLE ACCESS SHALL BE PROVIDED TO WITHIN 100 FEET OF TEMPORARY OR PERMANENT FIRE DEPARTMENT CONNECTIONS. VEHICLE ACCESS SHALL BE PROVIDED BY EITHER TEMPORARY OR PERMANENT ROADS CAPABLE OF SUPPORTING VEHICLE LOADING UNDER ALL WEATHER CONDITIONS. VEHICLE ACCESS SHALL BE MAINTAINED UNTIL PERMANENT FIRE APPARATUS ROADS ARE AVAILABLE.

2. FIRE LANE SIGNS SHALL BE SPACED AT A MINIMUM OF 200 FEET APART, SIZE TO BE 12" x 18" WITH A WHITE REFLECTING BACKGROUND AND RED LETTERS AND SHALL READ AS FOLLOWS: "FIRE LANE - NO PARKING - TOW-AWAY ZONE".

3. AS PER FIRE CODE, FIRE FIGHTING APPARATUS MUST BE ABLE TO ACCESS TO WITHIN 150' OF ANY PART OF BUILDING.

FEMA MAP NOTES :

1. THIS DEVELOPMENT IS WITHIN FLOOD ZONE AREA "X" ACCORDING TO F.I.R.M. COMMUNITY PANEL NUMBER 13051C0030G, MAP REVISED AUGUST 16, 2018 (NAVD 88).

2. THIS SITE IS IN ZONE "X" AND IS NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE.

3. CONTRACTOR IS TO VERIFY FEMA ELEVATIONS PRIOR TO ANY CONSTRUCTION ACTIVITIES.

TRAFFIC / RIGHT-OF-WAY AND DISCHARGE NOTES:

1. ALL ROAD CLOSINGS, DETOURS AND ETC. ARE TO BE COORDINATED WITH THE CITY OF PORT WENTWORTH, GEORGIA.

2. ANY AND ALL NECESSARY PERMITS MUST BE OBTAINED FROM THE CITY OF PORT WENTWORTH PRIOR TO COMMENCEMENT OF ANY WORK.

3. CONTRACTOR IS TO OBTAIN A R.O.W. PERMIT PRIOR TO PERFORMING ANY WORK WITHIN CITY OF PORT WENTWORTH RIGHT-OF-WAY.

4. CHLORINATED DISINFECTED WATER SHALL NOT BE DISCHARGED INTO THE STORMWATER SYSTEM.

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.

2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

SPECIAL ORDINANCE NOTE :

IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF PORT WENTWORTH'S ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTH'S, STANDARDS ARE TO TAKE PRECEDENCE.

PORT WENTWORTH ORDINANCE NOTES :

1. CONTRACTOR IS TO VERIFY ALL BSL'S, BUFFERS, ETC. WITH THE PORT WENTWORTH PLANNING AND ZONING DEPARTMENT PRIOR TO CONSTRUCTION ACTIVITIES.

SPECIAL F.F. NOTES :

1. CONTRACTOR TO VERIFY FEMA ELEVATIONS PRIOR TO ANY CONSTRUCTION ACTIVITIES AND COORDINATE WITH GOVERNING AGENCY REQUIREMENTS.

2. CONTRACTOR TO COORDINATE FINISH FLOOR ELEVATIONS WITH STRUCTURAL, ARCHITECTURAL AND M.E.P. PLANS.

Survey Information :

1. Survey information : Brewer Land Surveying (supplied by owner)
2. Date of Original Survey : August 09, 2024
3. Datum : NAVD 88

PROJECT INFORMATION :

P.I.N. : 70037 01053 (Lots 5 & 5A)

PROJECT ADDRESS : 0 Old Richmond Road
Port Wentworth, Georgia 31407

CURRENT ZONING : C-2 (General Commercial)

SITE SIZE : 1.654 ACRES

ESTIMATED DISTURBED AREA : 0.97 ACRES

SETBACKS :
FRONT = 25'
SIDE STREET = 25'
*REAR = 15'
*SIDE = 15'
*ABUTTING COMMERCIAL & INDUSTRIAL DISTRICTS.

BUILDING HEIGHT = 45'

MAX BUILDING COVERAGE = 60%

OWNER : Nishant Randerwala
112 Riverside Blvd
Port Wentworth, Ga., 31407

PRIMARY PERMITTEE EMAIL : nmra1234@gmail.com

PHONE : 912-544-0217

NOTES:

1. CONTRACTOR IS TO COORDINATE ALL GAS, LIGHTING, ELECTRICAL, PHONE, CABLE AND ANY OTHER REQUIRED UTILITIES WITH THE APPROPRIATE UTILITY AGENCIES.

2. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCING OF CONSTRUCTION ACTIVITIES AND FOR AVOIDING CONFLICT WITH SAME. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

3. CONTRACTOR IS TO COORDINATE ALL DEMOLITION WORK WITH THE OWNER. ALL ITEMS NOT TO BE RELOCATED OR GIVEN TO THE OWNER WILL BECOME THE PROPERTY OF THE CONTRACTOR.

4. REMOVE ALL TREES AS NECESSARY FOR PROPOSED CONSTRUCTION.

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

SCALE: 1" = 20'
0 20' 40' 50'

REVISIONS

BOSWELL DESIGN SERVICES, INC.
OFFICE : 4700 EAST HIGHWAY 80
Unit K, Suite 1
MAILING : 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED: ---
DRAWN: MAB
CHECKED: ---
DATE: NOV. 26, 2024
JOB NO. ---
SCALE: as shown

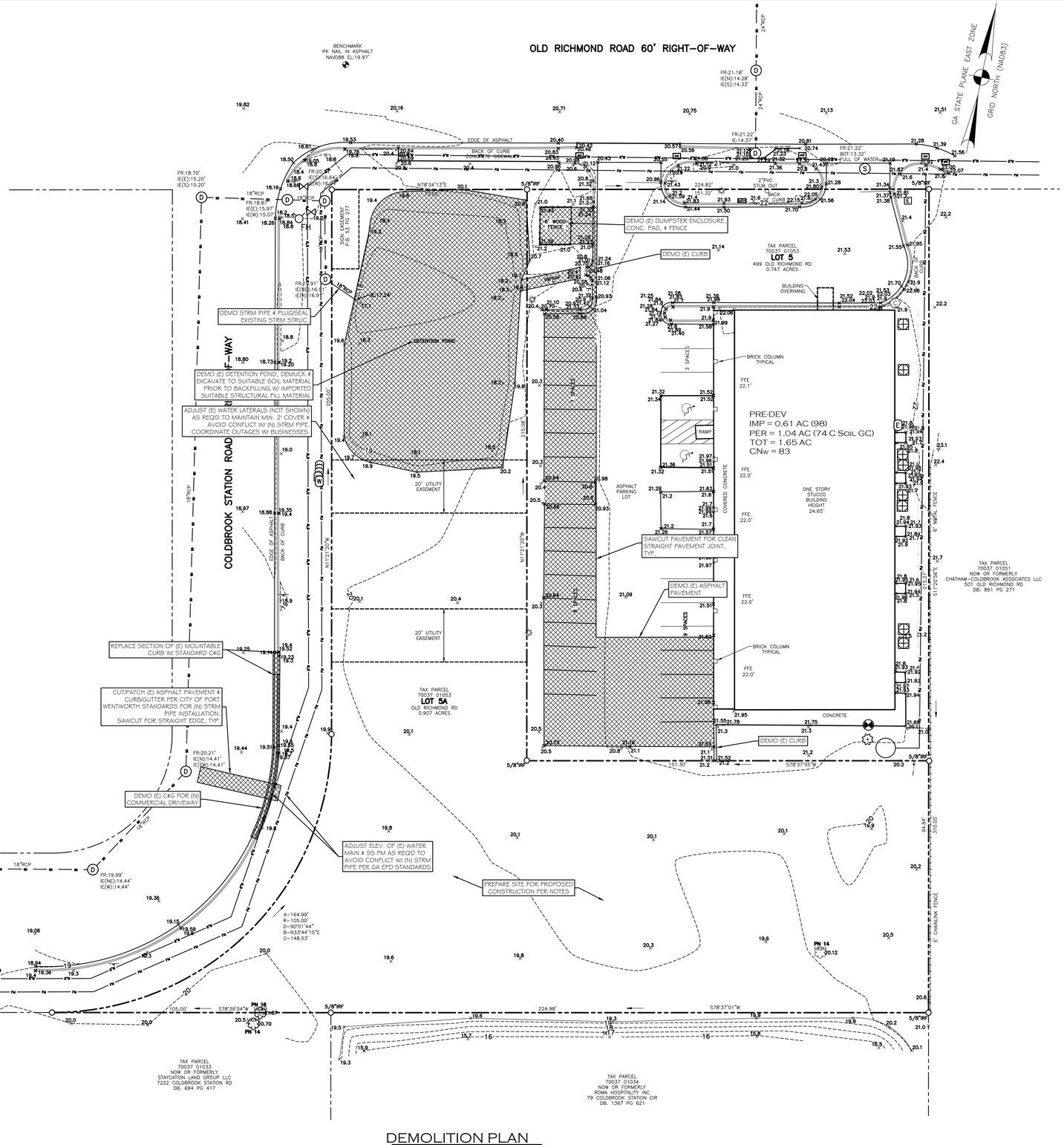
SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

EXISTING SITE PLAN

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
GEORGIA UTILITIES PROTECTION CENTER
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED
Mark Boswell
No. 28372
PROFESSIONAL
11-26-24
ENGINEER
MARK A. BOSWELL

DRAWING NUMBER
C-2
2 OF 28 SHEETS



DEMOLITION PLAN

1" = 20'

LEGEND

ITEM	EXISTING	PROPOSED
TOPO	18.4	FG 12.3
CONTOURS	----------	——12——
DRAINAGE FLOW ARROWS	←·-·-·-·-	←——————
TOP OF PARKING SLAB		TPS 12.30

LEGEND

NEW	EXISTING	DESCRIPTION
▭	▭	BUILDING
▭		RESURFACE ASPHALT PAVEMENT
▭	▭	ASPHALT PAVEMENT TYPE I
▭		ASPHALT PAVEMENT TYPE I I
▭	▭	CONCRETE PAVEMENT
▭	▭	CONCRETE SIDEWALK
— SD —		STORM DRAIN LINE
— SS —	— SS —	SANITARY SEWER LINE
— W —	— W —	WATER LINE
●	Ⓢ	SANITARY SEWER MANHOLE
	G.V. ⊗	GAS VALVE
⋈	W.V. ⊗	WATER VALVE
■	W.M. □	WATER METER
		FIRE HYDRANT
		SIGN
		FLARED END SECTION
13.00		SPOT ELEVATION
9	9	CONTOUR
I.E.4.13	I.E.4.13	INVERT ELEVATION
	—x—	CHAIN LINK FENCE
	·-·-·-	DITCH INVERT
	— · —	PROPERTY LINE
	IPF ○	IRON PIN FOUND
TW 16.83		TOP OF WALK
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SCALE: 1" = 20'

0 20' 40' 50'

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REVISIONS

DESIGNED ---
DRAWN MAB
CHECKED ---
DATE : NOV. 26, 2024
JOB NO. ---
SCALE: as shown

SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
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DEMOLITION PLAN

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
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GEORGIA REGISTERED
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DRAWING NUMBER
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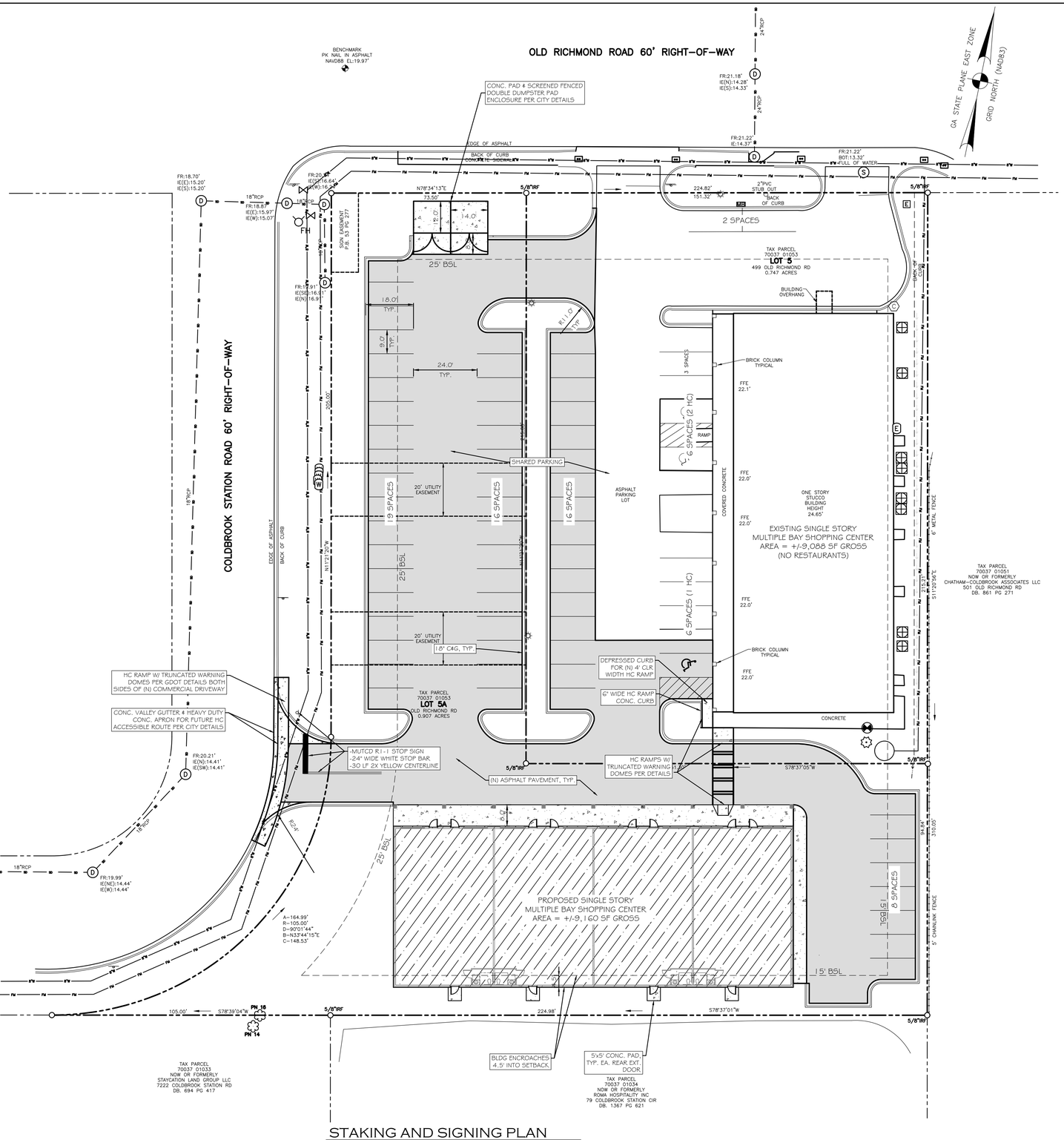
3 OF 28 SHEETS



STAKING AND SIGNING PLAN

1" = 20'

SPECIAL SIGNAGE AND STRIPING NOTES :

1. STOP SIGNS SHALL BE HIGH INTENSITY OR DIAMOND GRADE.
2. PAVEMENT MARKINGS ARE TO BE THERMOPLASTIC.
3. ALL SIGNS ARE TO BE IN ACCORDANCE WITH MUTCD.

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.
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SPECIAL AE AND VE ZONE NOTES :

1. BUILDINGS IN "AE" ZONES ARE TO HAVE THE FINISHED FLOOR SET A MINIMUM OF 1' ABOVE FLOOD.
2. BUILDINGS IN "VE" ZONES ARE TO HAVE THE LOWEST HORIZONTAL STRUCTURAL MEMBER SET A MINIMUM OF 1' ABOVE FLOOD.
3. BUILDINGS IN AE AND VE ZONES ARE TO HAVE ALL ELECTRICAL, PLUMBING, HVAC, DUCTWORK AND OTHER EQUIPMENT TO BE A MINIMUM OF 1' ABOVE FLOOD.
4. FLOOD VENTS ARE REQUIRED IN "AE" ZONES AND ARE TO HAVE 1 SQUARE INCH / SQUARE FOOT OF FLOOR PLAN AREA WITH A MINIMUM ROUND OPENING OF 3". A MINIMUM OF 2 OPENINGS WITH ALL OPENINGS EVENLY SPACED AROUND PERIMETER. BOTTOM OF OPENING SHALL BE 12" OR LESS ABOVE ADJACENT GRADE.
5. BREAK AWAY WALLS ARE REQUIRED IN "VE" ZONES.
6. COORDINATE SITE WORK AND FINISHED FLOOR ELEVATIONS WITH ARCHITECTURAL PLANS TO MAKE SURE BUILDING ELEVATIONS ARE SET AS PER CODE.

GENERAL NOTES:

1. DIMENSIONS ARE IN FEET AND DECIMAL OF FEET UNLESS NOTED OTHERWISE.
2. LIMITS OF CLEARING AND GRUBBING SHALL MATCH THE PROPERTY LINE BOUNDRY OR AS SHOWN ON THE PLANS. COORDINATE ALL CLEARING ACTIVITIES WITH THE ENGINEER/OWNER.
3. ALL COORDINATES AND BEARINGS SHOWN ARE BASED ON A SITE COORDINATE SYSTEM. CONTRACTOR SHALL VERIFY PRIOR TO THE START OF CONSTRUCTION.
4. BENCHMARKS SHALL BE VERIFIED BY THE CONTRACTOR AS TO LOCATION AND ELEVATION PRIOR TO THE START OF CONSTRUCTION.
5. ALL ANGLES ARE 90 DEGREES UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL VERIFY THAT OVERALL SITE DIMENSIONS AGREE WITH THE INCREMENTAL LAYOUT DIMENSIONS AS SHOWN. ANY DISCREPANCIES WITH DIMENSIONS AND COORDINATES OR PROPERTY LINES SHALL BE ADJUSTED AND APPROVED BY THE ENGINEER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING HORIZONTAL AND VERTICAL CONTROL ON THE SITE BASED ON EXISTING MONUMENTS. ALL COSTS INVOLVED IN LOCATING THE EXISTING MONUMENTS AND CARRYING THE STAKING LAYOUT TO THE SITE SHALL BE BORNE BY THE CONTRACTOR.
8. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCING OF CONSTRUCTION AND FOR AVOIDING CONFLICT WITH SAME. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
9. CONTRACTOR TO VERIFY ACTUAL BUILDING DIMENSIONS WITH ARCH. PLANS.
10. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.

SHARED PARKING CALCULATIONS:

EXISTING SINGLE STORY MULTIPLE BAY SHOPPING CENTER AREA
+/-9,055 SF GROSS LEASABLE AREA (NO RESTAURANTS EXIST CURRENTLY)
EXISTING PARKING = 26 SPACES (INCLUDES 2 HC SPACES)

PROPOSED SINGLE STORY MULTIPLE BAY SHOPPING CENTER
*RETAIL, MULTI TENANT SHOPPING CENTERS W/ <20% RESTAURANT SPACE PER ZONING ORDINANCE JUNE 2023 (PDF)
REQUIRED (<75,000 SF W/ 20% OR LESS OF RESTAURANT SPACE*):
=> 100% RETAIL: 4 SPACES/ 1,000 SF UFA = 9,160 SF*1.0/1,000*4 =37 SPACES
=> TOTAL REQUIRED NEW BLDG = 37 SPACES
=> TOTAL PROVIDED NEW BLDG = 47 SPACES

=>TOTAL SHARED PARKING PROVIDED = 73 SPACES (INCLUDES 3 HC SPACES)

*RESTAURANT NOTE: <20% RESTAURANT SPACE IS FOR BOTH BUILDINGS (E) & (N); THEREFORE, BETWEEN THE EIGHT (8) TOTAL TENANT BAYS, ONLY ONE (1) BAY SHALL BE USED FOR A RESTAURANT.

PAVEMENT MARKING NOTES :

1. ALL SIGNAGE AND STRIPING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DESIGN (MUTCD)".

PORT WENTWORTH ORDINANCE NOTES :

1. CONTRACTOR IS TO VERIFY ALL BSLS, BUFFERS, ETC. WITH THE CITY OF PORT WENTWORTH PLANNING AND ZONING DEPARTMENT PRIOR TO CONSTRUCTION ACTIVITIES.

SPECIAL HANDICAP RAMP NOTES :

1. ALL HANDICAP RAMPS SHALL BE CONSTRUCTED AND "TINTED" AS PER ADA GUIDELINES AND REQUIREMENTS.

FIRE PROTECTION WATER :

AS PER 2018 IBC :
1. RETAIL = M OCCUPANCY (SECTION 309.1)
2. SPRINKLER PROTECTION IS NOT REQUIRED AS PER SECTION 903.2.7.

SITE FIRE PROTECTION NOTES :

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3310.10 REQUIRED ACCESS.
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2. FIRE LANE SIGNS SHALL BE SPACED AT A MINIMUM OF 200 FEET APART, SIZE TO BE 12" x 18" WITH A WHITE REFLECTING BACKGROUND AND RED LETTERS AND SHALL READ AS FOLLOWS: "FIRE LANE - NO PARKING - TOW-AWAY ZONE".
3. AS PER FIRE CODE, FIRE FIGHTING APPARATUS MUST BE ABLE TO ACCESS TO WITHIN 150' OF ANY PART OF BUILDING.

SPECIAL ORDINANCE NOTE :

IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF PORT WENTWORTH'S ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTH'S, STANDARDS ARE TO TAKE PRECEDENCE.

STOP SIGN AND STOP BAR INSTALLATION NOTES :

1. STOP BARS ARE TO BE WHITE, 24" WIDE x 12' LONG, INSTALLED 6'-0" FROM THE INTERSECTING ROAD PAVEMENT EDGE AS PER MUTCD 3B.16.
2. STOP SIGNS ARE TO BE INSTALLED ALLIGNED WITH THE STOP BARS AS PER MUTCD 3B.16.

GREENSPACE CALCULATIONS :

~~TOTAL SITE = 2.17 AC.~~
~~PAVING / BUILDING / ETC. = 1.45 AC.~~
~~GREENSPACE = 0.72 AC.~~
~~0.72 AC / 2.17AC = 0.3349 = 34 % GREENSPACE~~

SIDEWALK NOTES :

1. ALL SIDEWALKS ARE TO BE ADA COMPLIANT.
~~2. PEDESTRIAN PATHS IN PARKING AREAS ARE TO BE 5' WIDE - PATTERN, COLOR AND TEXTURE TO BE COORDINATED WITH OWNER AND THE CITY OF FOLEY.~~

TRAFFIC / RIGHT-OF-WAY AND DISCHARGE NOTES:

1. ALL ROAD CLOSINGS, DETOURS AND ETC. ARE TO BE COORDINATED WITH THE CITY OF PORT WENTWORTH, GEORGIA.
2. ANY AND ALL NECESSARY PERMITS MUST BE OBTAINED FROM THE CITY OF PORT WENT WORTH PRIOR TO COMMENCEMENT OF ANY WORK.
3. CONTRACTOR IS TO OBTAIN A R.O.W. PERMIT PRIOR TO PERFORMING ANY WORK WITHIN CITY OF PORT WENTWORTH RIGHT-OF-WAY.
4. CHLORINATED DISINFECTED WATER SHALL NOT BE DISCHARGED INTO THE STORMWATER SYSTEM.

SITE LIGHTING NOTE :

ALL SITE LIGHTING IS TO BE AS PER OWNER AND IS TO BE COORDINATED WITH OWNER FOR POLE PLACEMENT, APPROVAL BY CITY OF PORT WENTWORTH, ETC.

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

SCALE: 1" = 20'
0 20' 40' 50'

BOSWELL DESIGN SERVICES, INC.
OFFICE : 4700 EAST HIGHWAY 80
Unit K, Suite 104
MAILING : 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

REVISIONS

DESIGNED: ---
DRAWN: MAB
CHECKED: ---
DATE: NOV. 26, 2024
JOB NO. ---
SCALE: as shown

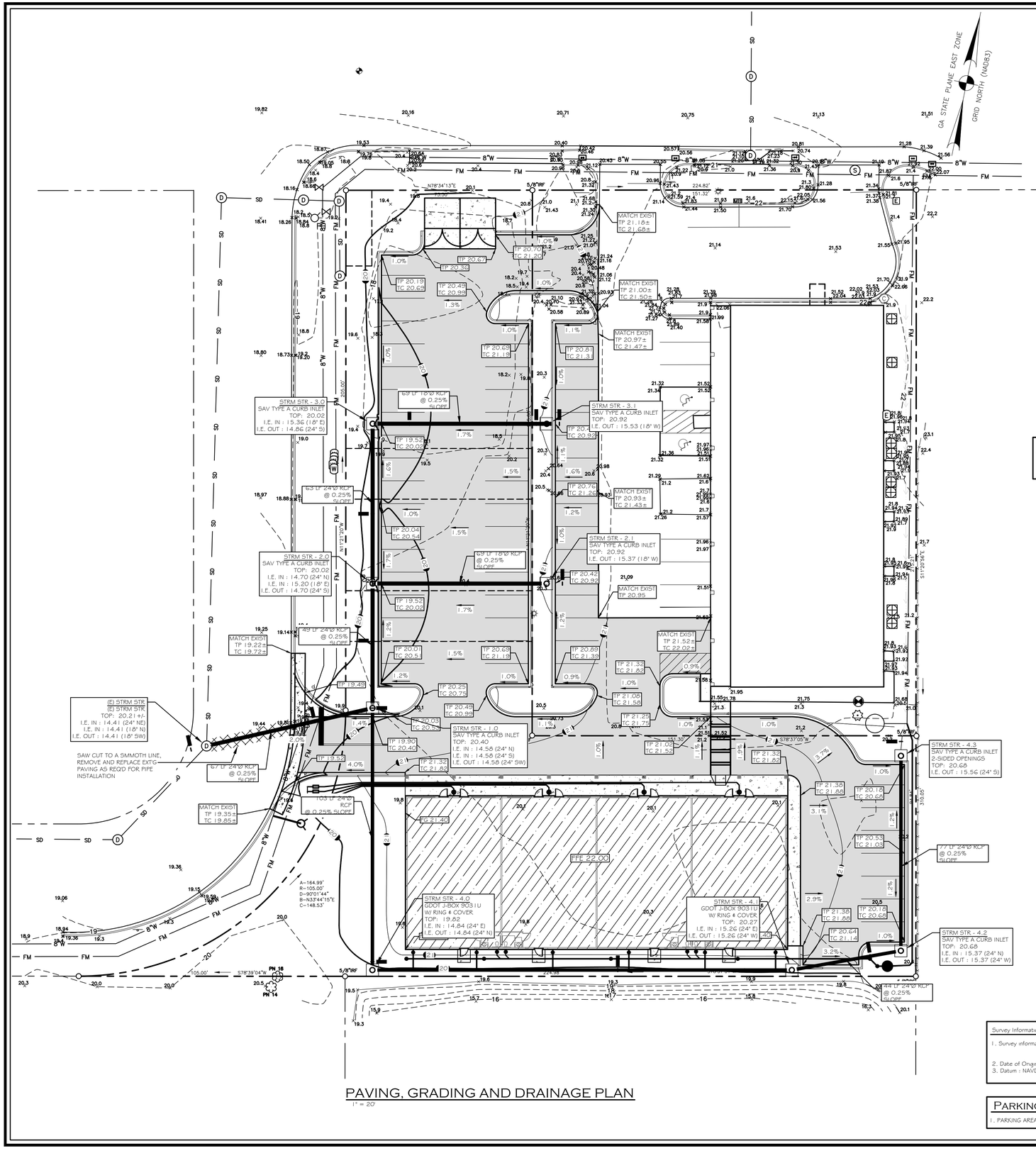
SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

STAKING AND SIGNING PLAN

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
GEORGIA 811 ONE CALL BEFORE YOU DIG
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED No. 28372 PROFESSIONAL ENGINEER
Mark Boswell
11-26-24
MARK A. BOSWELL

DRAWING NUMBER
C-4
4 OF 28 SHEETS



PAVING, GRADING AND DRAINAGE PLAN

1" = 20'

GEOTECHNICAL NOTES :

1. A GEOTECHNICAL INVESTIGATION SHOULD BE PERFORMED PRIOR TO PAVING ROADS FOR PAVEMENT DESIGN RECOMMENDATIONS AND AS PER THE CITY OF POOLERS STANDARD DETAIL.

2. IT IS STRONGLY RECOMMENDED THAT A GEOTECHNICAL INVESTIGATION IS PERFORMED BY A REGISTERED GEOTECHNICAL ENGINEER IN THE STATE OF GEORGIA PRIOR TO BUILDING SLABS BEING POURED FOR RECOMMENDATIONS FOR SOCK DRAINS, FOUNDATION DESIGN, ETC.

FEMA MAP NOTES :

1. THIS DEVELOPMENT IS WITHIN FLOOD ZONE AREA "X" ACCORDING TO F.I.R.M. COMMUNITY PANEL NUMBER 13051C0030G, MAP REVISED AUGUST 16, 2018 (NAVD 88).

2. THIS SITE IS IN ZONE "X" AND IS NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE.

3. CONTRACTOR IS TO VERIFY FEMA ELEVATIONS PRIOR TO ANY CONSTRUCTION ACTIVITIES.

SPECIAL ORDINANCE NOTE :

IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF PORT WENTWORTHS ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTHS, STANDARDS ARE TO TAKE PRECEDENCE.

SPECIAL DETENTION POND NOTE :

DETENTION FOR THIS PROJECT IS BEING ACHIEVED BY UTILIZING THE EXTG PARK DETENTION POND AND THERFORE DETENTION IS NOT BEING PLANNED FOR THIS PROJECT.

STORM AND UTILITIES MANHOLE AND BOX NOTES :

1. INVERT ELEVATIONS ARE TO BE CONSIDERED AS PIPE INVERTS AND NOT AS THE INVERT OF THE MANHOLE, BOX, ETC.

SPECIAL AE AND VE ZONE NOTES :

1. BUILDINGS IN "AE" ZONES ARE TO HAVE THE FINISHED FLOOR SET A MINIMUM OF 1' ABOVE FLOOD.

2. BUILDINGS IN "VE" ZONES ARE TO HAVE THE LOWEST HORIZONTAL STRUCTURAL MEMBER SET A MINIMUM OF 1' ABOVE FLOOD.

3. BUILDINGS IN AE AND VE ZONES ARE TO HAVE ALL ELECTRICAL, PLUMBING, HVAC, DUCTWORK AND OTHER EQUIPMENT TO BE A MINIMUM OF 1' ABOVE FLOOD.

4. FLOOD VENTS ARE REQUIRED IN "AE" ZONES AND ARE TO HAVE 1 SQUARE INCH / SQUARE FOOT OF ENCLOSED AREA WITH A MINIMUM ROUND OPENING OF 3", A MINIMUM OF 2 OPENINGS WITH ALL OPENINGS EVENLY SPACED AROUND PERIMETER. BOTTOM OF OPENING SHALL BE 12" OR LESS ABOVE ADJACENT GRADE.

5. BREAK AWAY WALLS ARE REQUIRED IN "VE" ZONES.

6. COORDINATE SITE WORK AND FINISHED FLOOR ELEVATIONS WITH ARCHITECTURAL PLANS TO MAKE SURE BUILDING ELEVATIONS ARE SET AS PER CODE.

NOTES:

1. CONTRACTOR IS TO COORDINATE ALL GAS, LIGHTING, ELECTRICAL, PHONE, CABLE AND ANY OTHER REQUIRED UTILITIES WITH THE APPROPRIATE UTILITY AGENCIES.

2. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCING OF CONSTRUCTION ACTIVITIES AND FOR AVOIDING CONFLICT WITH SAME. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

3. CONTRACTOR IS TO COORDINATE ALL DEMOLITION WORK WITH THE OWNER. ALL ITEMS NOT TO BE RELOCATED OR GIVEN TO THE OWNER WILL BECOME THE PROPERTY OF THE CONTRACTOR.

4. REMOVE ALL TREES AS NECESSARY FOR PROPOSED CONSTRUCTION.

SPECIAL F.F. NOTES :

1. CONTRACTOR TO VERIFY FEMA ELEVATIONS PRIOR TO ANY CONSTRUCTION ACTIVITIES AND COORDINATE WITH GOVERNING AGENCY REQUIREMENTS.

2. CONTRACTOR TO COORDINATE FINISH FLOOR ELEVATIONS WITH STRUCTURAL, ARCHITECTURAL AND M.E.P. PLANS.

CULVERT PIPE INSTALLATION NOTES :

1. CULVERTS ARE TO BE INSTALLED AS PER CITY OF PORT WENTWORTHS DETAILS AND SPECS.
2. CULVERT DETAILS AND SPECS WERE NOT AVAILABLE AT THE TIME OF THIS SUBMITTAL AND SHALL BE OBTAINED FROM CITY OF PORT WENTWORTHS STORMWATER DEPARTMENT.

FIRE PROTECTION WATER :

AS PER 2018 IBC :
1. RETAIL = M OCCUPANCY (SECTION 309.1)
2. SPRINKLER PROTECTION IS NOT REQUIRED AS PER SECTION 903.2.7.

SITE FIRE PROTECTION NOTES :

1. ACCESS FOR FIREFIGHTING
3310.1 REQUIRED ACCESS.
APPROVED VEHICLE ACCESS FOR FIREFIGHTING SHALL BE PROVIDED TO ALL CONSTRUCTION OR DEMOLITION SITES. VEHICLE ACCESS SHALL BE PROVIDED TO WITHIN 100 FEET OF TEMPORARY OR PERMANENT FIRE DEPARTMENT CONNECTIONS. VEHICLE ACCESS SHALL BE PROVIDED BY EITHER TEMPORARY OR PERMANENT ROADS CAPABLE OF SUPPORTING VEHICLE LOADING UNDER ALL WEATHER CONDITIONS. VEHICLE ACCESS SHALL BE MAINTAINED UNTIL PERMANENT FIRE APPARATUS ROADS ARE AVAILABLE.

2. FIRE LANE SIGNS SHALL BE SPACED AT A MINIMUM OF 200 FEET APART, SIZE TO BE 12" x 18" WITH A WHITE REFLECTING BACKGROUND AND RED LETTERS AND SHALL READ AS FOLLOWS: "FIRE LANE - NO PARKING - TOW-AWAY ZONE".

3. AS PER FIRE CODE, FIRE FIGHTING APPARATUS MUST BE ABLE TO ACCESS TO WITHIN 150' OF ANY PART OF BUILDING.

SPECIAL CONSTRUCTION NOTES :

1. SITE AND BUILDING CONTRACTOR IS TO OBTAIN, REVIEW AND FOLLOW THE RECOMMENDATIONS SET FORTH BY THE GOETECHNICAL REPORT.

2. GROUNDWATER MUST BE LOWERED DURING CONSTRUCTION BY ANY MEANS APPROVED BY THE GEOTECHNICAL ENGINEER.

3. DE-WATERING MAY BE ACCOMPLISHED BY WELLPOINTS AND / OR DITCHES WITH SUMPS AND PUMPS.

4. STIPPING OF PROJECT SITE DEPTHS MAY BE FROM 2 TO IN EXCESS OF 5 FEET BELOW THE GROUND SURFACE.

5. FILL AND / OR BACKFILL SHALL CONSIST OF COARSE-GRAINED SOILS CLASSIFIED AS SW, SP, SM OR SP-SM WITH A MAXIMUM OF 15% PASSING A #200 SIEVE.

6. BACKFILL FOR PAVING SHALL BE PLACED IN 6 INCH LIFTS AND COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM D-1557.

7. ANY TRENCH LEFT VACANT (from relocate) UTILITIES, STUMP HOLES, ETC. SHALL BE BACKFILLED WITH APPROVED SOIL, PLACED IN 6 INCH LIFTS AND COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM D-1557.

8. SUBGRADE SHALL BE PROOF ROLLEN WITH A LOADED DUMP TRUCK. ANY "PUMPING" OR UNSTABLE AREAS SHALL BE REMOVED AND REPLACED AS PER SPECIAL CONSTRUCTION NOTE #6. IN THE CASE OF EXCESSIVE MOISTURE, THE AREA MAY BE ALLOWED TO DRY AND RE-PROOF ROLLED.

9. ALL FILL SOILS FOR THIS PROJECT SHALL BE AS PER SPECIAL CONSTRUCTION NOTE #5.

10. SOILS CLASSIFIED AS MH, CH, CC OR SC WILL NOT BE ACCEPTABLE.

11. ALL FOOTING EXCAVATIONS AND SLAB SUBGRADES SHALL BE COMPACTED TO A MINIMUM OF 95% IN ACCORDANCE WITH ASTM D-1557.

12. SLABS ON GRADE SHOULD BE SUPPORTED BY A MINIMUM OF 4 INCHES OF GRANULAR FREE DRAINING GRAVEL OR COARSE SAND TO REMOVE MOISTURE.

13. A VAPOR RETARDING MEMBRANE SHALL BE PLACED BETWEEN GRANULAR BASE AND CONCRETE TO PREVENT MIGRATION.

REAR

FRONT

TYP ROOF PLAN

SIDEWALK NOTES :

1. ALL SIDEWALKS ARE TO BE ADA COMPLIANT.
2. ~~PEDESTRIAN PATHS IN PARKING AREAS ARE TO BE 6' WIDE - PATTERN, COLOR AND TEXTURE TO BE COORDINATED WITH OWNER AND THE CITY OF PORT WENTWORTH.~~

GENERAL NOTES:

1. *SEE SHEET C2 FOR LEGEND.*
2. *LIMITS OF GRADING AND GRASSING ARE INDICATED ON THE SOIL EROSION AND SEDIMENT CONTROL PLANS AS "LIMITS OF DISTURBANCE".*
3. *CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCING OF CONSTRUCTION AND FOR AVOIDING CONFLICT WITH SAME. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.*
4. *ALL DISTURBED AREAS FROM NEW CONSTRUCTION ACTIVITIES WILL BE SEEDED, MULCHED, FERTILIZED AND WATERED TO PROMOTE A SUFFICIENT GROUND COVER THAT WILL PREVENT SOIL EROSION.*
5. *DRAINAGE: ALL EXCAVATION SHALL BE PERFORMED SO THAT THE SITE AND THE AREA IMMEDIATELY SURROUNDING THE SITE WHICH EFFECTS THE OPERATIONS WILL BE CONTINUALLY AND EFFECTIVELY DRAINED. SURFACE WATER, GROUNDWATER, OR ANY PERCHED WATER WHICH MIGHT BE ENCOUNTERED DURING EXCAVATIONS SHALL BE REMOVED BY ANY ACCEPTABLE MEANS APPROVED BY THE ENGINEER.*
6. *ELEVATIONS ARE BASED ON NAVD 88 DATUM. SEE C2 FOR ELEVATION DATUM.*
7. *CONTRACTOR TO VERIFY ALL EXISTING AND PROPOSED STRUCTURE LOCATIONS (drainage, sanitary, etc.) TOPS AND DEPTHS PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION.*
8. ~~DETENTION BASIN MAY BE ENLARGED (not deepened) TO GAIN FILL FOR CONSTRUCTION IF THE MATERIAL IS SATISFACTORY.~~
9. ~~DETENTION BASIN IS TO BE CONSTRUCTED WITH 3:1 SIDESLOPES.~~
10. ~~DETENTION BASIN IS TO BE SODDED TO PREVENT EROSION.~~
11. 18" CURB AND GUTTER (if required) TO BE CONCRETE.
12. #12 GA. WIRE SHALL BE INSTALLED ABOVE ALL STORM PIPES AT 1 TO 2 FEET ABOVE PIPE.
13. ALL STORM PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.
14. SEE UTILITY PLAN FOR PIPE SEPARATION NOTES.
15. PARKING AREA IS TO BE PRIVATELY OWNED AND MAINTAINED.

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.

2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

Survey Information :

1. Survey information : Brewer Land Surveying (supplied by owner)
2. Date of Ongoinal Survey : August 09, 2024
3. Datum : NAVD 88

PARKING OWNERSHIP NOTES :

1. PARKING AREAS ARE TO BE PRIVATELY OWNED AND MAINTAINED.

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

SCALE: 1" = 20'
0 20' 40' 50'

REVISIONS

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MAILING : 103 NASSAU DRIVE
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912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED: ---
DRAWN: MAB
CHECKED: ---
DATE: NOV. 26, 2024
JOB NO. ---
SCALE: as shown

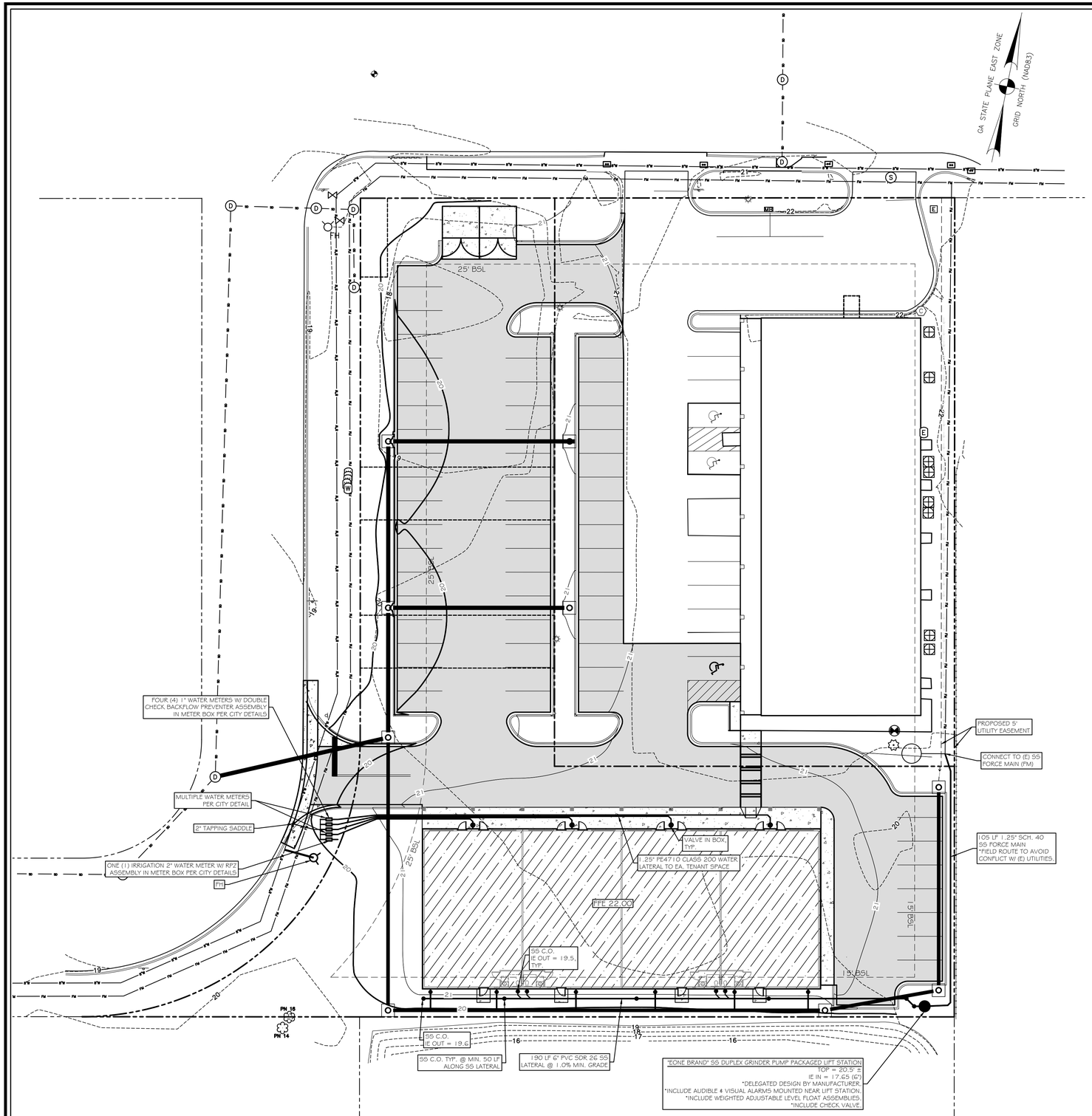
SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
FORT WENTWORTH, GA

PAVING, GRADING AND DRAINAGE PLAN

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
GEORGIA UTILITIES PROTECTION CENTER
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED PROFESSIONAL ENGINEER
No. 28372
11-26-24
MARK A. BOSWELL

DRAWING NUMBER
C-5
5 OF 28 SHEETS



UTILITY PLAN

1" = 20'

SPECIAL UTILITY TERMINATION NOTES :

1. ALL UTILITIES (WATER, SEWER, GAS, ELECTRIC, ETC.) NOT TO BE USED ON THIS PROJECT ARE TO BE TERMINATED AS PER THE UTILITY PROVIDERS INSTRUCTIONS.

2. ALL UTILITY TERMINATIONS ARE TO BE COORDINATED WITH THE UTILITY PROVIDER, OWNER AND CITY OF PORT WENTWORTH.

FEMA MAP NOTES :

1. THIS DEVELOPMENT IS WITHIN FLOOD ZONE AREA "X" ACCORDING TO F.I.R.M. COMMUNITY PANEL NUMBER 13051C0030G, MAP REVISED AUGUST 16, 2018 (NAVD 88).

2. THIS SITE IS IN ZONE "X" AND IS NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE.

3. CONTRACTOR IS TO VERIFY FEMA ELEVATIONS PRIOR TO ANY CONSTRUCTION ACTIVITIES.

UTILITY OWNERSHIP NOTES :

1. WATER SYSTEMS BEHIND METERS ARE TO BE PRIVATELY OWNED AND MAINTAINED.
2. SANITARY SEWER LIFT STATION & FORCE MAIN ARE TO BE PRIVATELY OWNED AND MAINTAINED.

SPECIAL ORDINANCE NOTE :

IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF PORT WENTWORTH'S ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTH'S, STANDARDS ARE TO TAKE PRECEDENCE.

SPECIAL WATER LINE NOTES :

1. ALL WATER METERS ENCOUNTERED ON THE PROJECT SITE, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE DISCONNECTED AND RETURNED TO THE CITY OF PORT WENTWORTH WATER AND SEWER DEPARTMENT.

2. ALL LATERALS WHICH ARE REMOVED FROM SERVICE SHALL BE CAPPED AS CLOSE TO THE MAIN AS PRACTICAL WITHOUT REMOVING ROADWAY. THIS WORK IS TO BE COORDINATED WITH THE CITY OF PORT WENTWORTH WATER AND SEWER DEPARTMENT.

TRACER WIRE NOTES :

1. ALL WATER MAINS, WATER LATERALS AND FIRE HYDRANTS ARE TO HAVE A #12 GAUGE SOLID COPPER WIRE INSTALLED WITH EACH UTILITY. IT SHALL BE INSTALLED IN SUCH A MANNER THAT THE WIRES ARE CONNECTED TO EACH OTHER AND CAN BE CONTINUOUSLY TRACED. THE WATER DEPARTMENT SHALL CONDUCT A TRACING TEST TO ENSURE COMPLIANCE.

DROP MANHOLE NOTES :

1. DROP MANHOLES SHALL BE PRECAST CONFORMING TO ASTM C478 AND SHALL BE BUILT AT THE LOCATIONS AND IN CONFORMANCE WITH THE DETAILS SHOWN WHERE THE DIFFERENCE IN IE ELEVATION BETWEEN THE INCOMING PIPE AND MANHOLE IE IS MORE THAN 2 FEET.
2. PROTECTIVE COATINGS ARE REQUIRED FOR ALL WET WELLS, RECEIVING MANHOLES, DROP MANHOLES, ANY STRUCTURE WHERE A FORCE MAIN TERMINATES OR HIGH LEVELS OF CORROSION ARE ANTICIPATED.

SPECIAL WATER LINE NOTES :

1. Pipe, fittings, valves and other accessories shall, unless otherwise directed, be unloaded at the point of delivery and stored where they will be protected and will not be hazardous to traffic. They shall at all times be handled with care to avoid damage. The interior of all pipe, fittings and other accessories shall be kept free from dirt and foreign matter at all times.

2. Any defective, damaged, or unsound pipe shall be rejected. All foreign matter or dirt shall be removed from the inside of the pipe before it is lowered into it's position in the trench and shall be kept clean by approved means during and after laying. Care shall be taken to prevent dirt from entering the joint space. During installation, when pipe laying is not in progress, a mechanical joint plug or cap, or approved equal, will be used to form a water tight seal at both ends of the line being laid and no trench water shall be permitted to enter the pipe.

3. Clean the interiors of all pipe by brushing, swabbing or washing out all dirt before placement.

4. Flush the new pipe lines until the water runs clear at the end of all mains and laterals. This should be done after the pressure test and before disinfection. Minimum flush time and velocity are to be 2.5 fps which is necessary to purge the line of foreign material.

5. All materials used and come into contact with drinking water during its distribution shall not adversely affect drinking water quality and public health and must be certified for conformance with American National Standards Institute/National Sanitation Foundation Standard 61 (ANSI/NSF Standard 61).

6. All new sanitary sewer laterals and new mains are required to be televised at the owner's / contractor's expense.

7. All sanitary sewer laterals are required to be capped.

8. All sanitary sewer laterals shall be connected to the sewer main at a 90 degree angle.

FIRE PROTECTION WATER :

AS PER 2018 IBC :
1. RETAIL = M OCCUPANCY (SECTION 309.1)
2. SPRINKLER PROTECTION IS NOT REQUIRED AS PER SECTION 903.2.7.

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.

2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

SITE FIRE PROTECTION NOTES :

1. ACCESS FOR FIREFIGHTING
3310.1 REQUIRED ACCESS.
APPROVED VEHICLE ACCESS FOR FIREFIGHTING SHALL BE PROVIDED TO ALL CONSTRUCTION OR DEMOLITION SITES. VEHICLE ACCESS SHALL BE PROVIDED TO WITHIN 100 FEET OF TEMPORARY OR PERMANENT FIRE DEPARTMENT CONNECTIONS. VEHICLE ACCESS SHALL BE PROVIDED BY EITHER TEMPORARY OR PERMANENT ROADS CAPABLE OF SUPPORTING VEHICLE LOADING UNDER ALL WEATHER CONDITIONS. VEHICLE ACCESS SHALL BE MAINTAINED UNTIL PERMANENT FIRE APPARATUS ROADS ARE AVAILABLE.

2. FIRE LANE SIGNS SHALL BE SPACED AT A MINIMUM OF 200 FEET APART, SIZE TO BE 12" x 18" WITH A WHITE REFLECTING BACKGROUND AND RED LETTERS AND SHALL READ AS FOLLOWS: "FIRE LANE - NO PARKING - TOW-AWAY ZONE".

3. AS PER FIRE CODE, FIRE FIGHTING APPARATUS MUST BE ABLE TO ACCESS TO WITHIN 150' OF ANY PART OF BUILDING.

Survey Information :

1. Survey information : Brewer Land Surveying (supplied by owner)

2. Date of Original Survey : August 09, 2024
3. Datum : NAVD 88

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

SCALE: 1" = 20'
0 20' 40' 50'

REVISIONS

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Unit N, Suite 1
MAILING : 103 NASSAU DRIVE
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912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED ---
DRAWN MAB
CHECKED ---
DATE : NOV. 26, 2024
JOB NO. ---
SCALE: as shown

SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT KAPERWALA
PORT WENTWORTH, GA

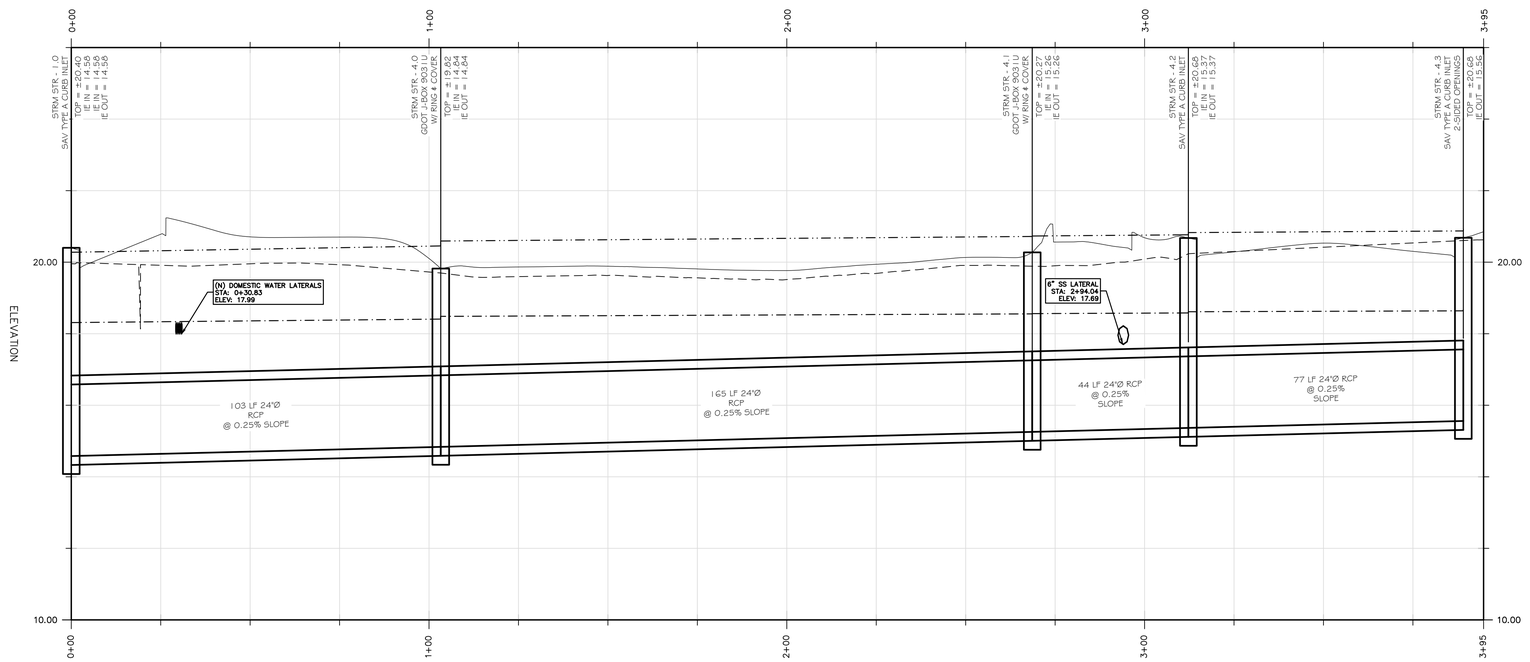
UTILITY PLAN, NOTES AND DETAILS

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER
1-800-282-7411

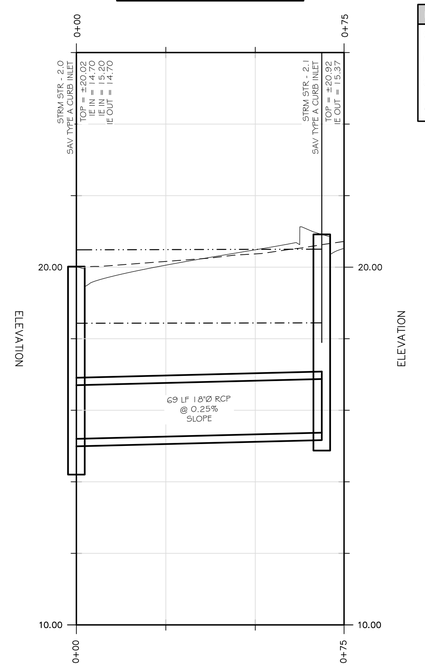
GEORGIA REGISTERED No. 28372 PROFESSIONAL ENGINEER MARK A. BOSWELL
11-26-24

DRAWING NUMBER
C-6
6 OF 28 SHEETS

STRM ALIGN 1.0-4.0
STATION: 0+00.00 THRU 3+94.75

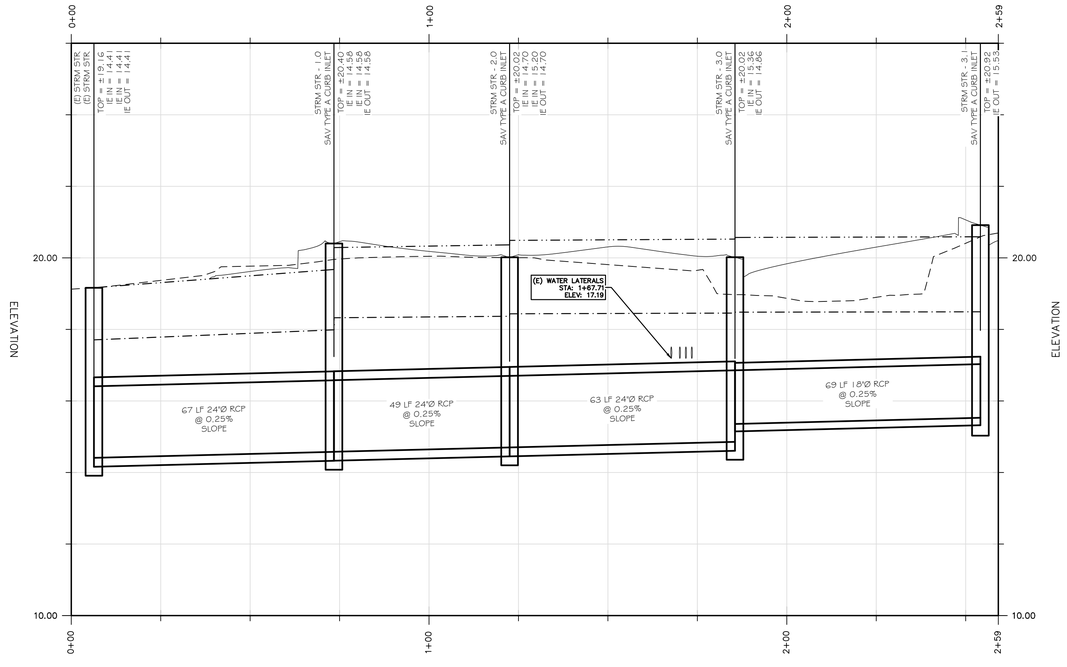


STRM ALIGN 2.0 - 2.1
STATION: 0+00.00 THRU 0+74.82



PROFILE LEGEND:
- EXISTING GRADE
- PROPOSED GRADE
- 25-YEAR HGL
- 100-YEAR HGL

STRM ALIGN 1.0 - 3.1
STATION: 0+00.00 THRU 2+59.11



SPECIAL ORDINANCE NOTE :

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VERTICAL SCALE: 1" = 2'
0 2' 4' 5'

HORIZONTAL SCALE: 1" = 20'
0 20' 40' 50'

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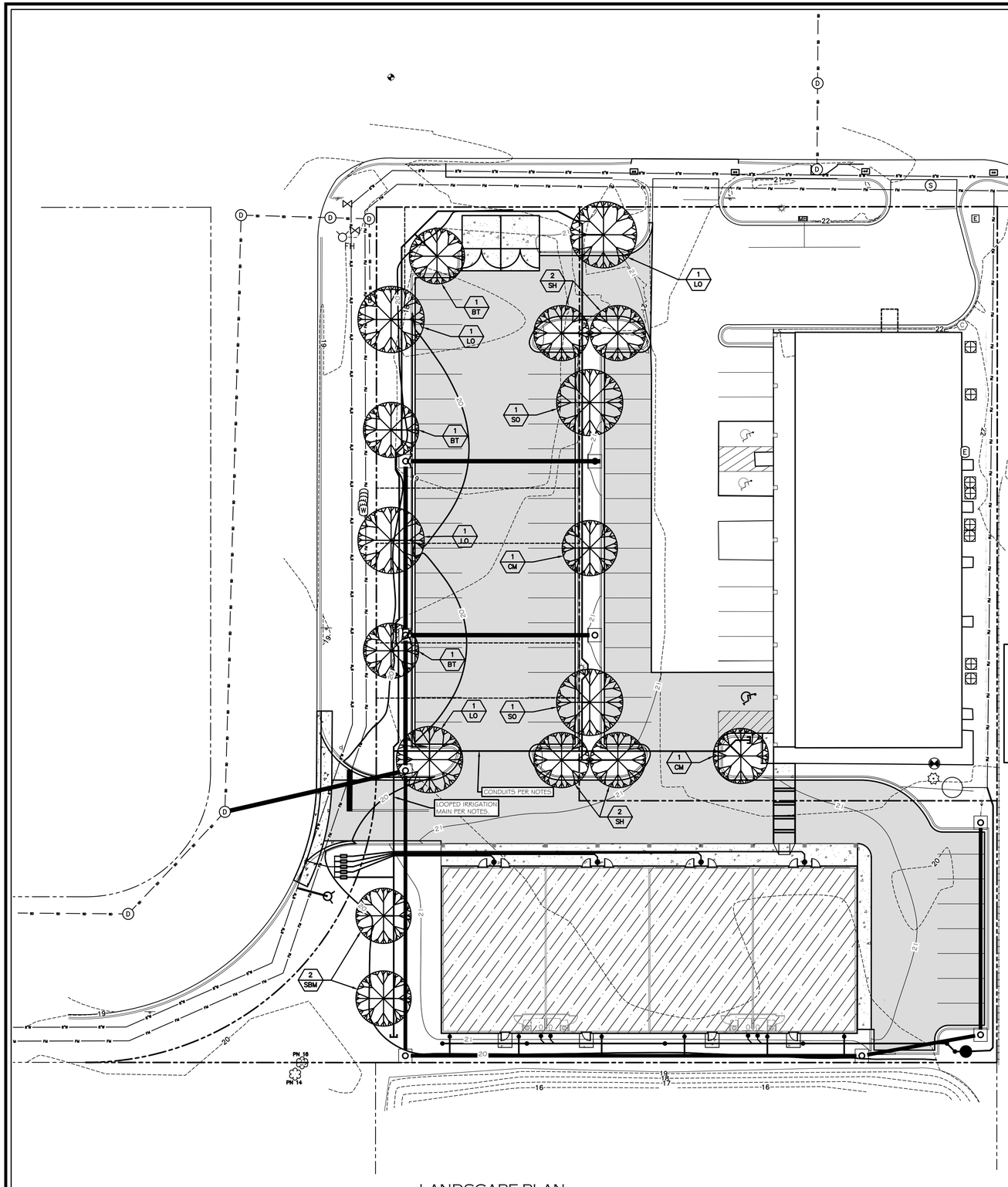
C-7
7 OF 28 SHEETS



LANDSCAPE PLAN

1" = 20'

SPECIAL ORDINANCE NOTE :

IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF PORT WENTWORTH'S ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTH'S, STANDARDS ARE TO TAKE PRECEDENCE.

STREAM BUFFER ENCROACHMENT NOTES :

1 . NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.

2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

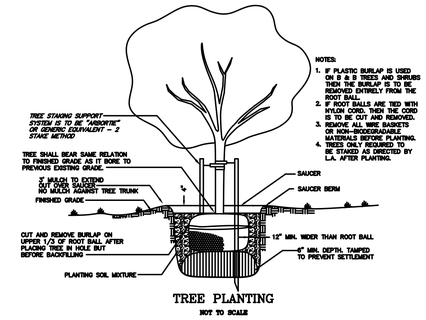
GREENSPACE CALCULATIONS :

TOTAL SITE = 2.16 AC.

PAVING / BUILDING / ETC. = 1.44AC.

GREENSPACE = 0.72 AC.

0.72 AC. / 2.15AC. = 0.3349 = 34 % GREENSPACE



TREE PLANTING

NOT TO SCALE

PLANT LEGEND

KEY	SCIENTIFIC & COMMON NAME
– / –	PLANT QUANTITY / PLANT KEY

LANDSCAPE LEGEND

- PROPOSED TREE OR SHRUB
- EXISTING TREE OR SHRUB
- PROPOSED ACCENT PLANT

PLANTED TREES AND SHRUBS

SYMBOL	NUMBER	NAME	SIZE	MATURE SIZE	QUALITY
LO	4	LIVE OAK	3" CAL.	LARGE	PREFERRED
CM	2	CREPE MYRTLE	2" CAL.	MEDIUM	PREFERRED
SM	2	SWEET BAY MAGNOLIA	2" CAL.	MEDIUM	PREFERRED
BT	3	BLACK TUPELO	2" CAL.	MEDIUM	PREFERRED
SH	4	SAVANNAH HOLLY	2" CAL.	MEDIUM	PREFERRED
SO	2	SHUMARD OAK	3" CAL.	LARGE	PREFERRED
	17	TOTAL TREES PLANTED			

SPECIAL / GENERAL IRRIGATION NOTES :

1. IRRIGATION PIPE SHALL BE PURPLE PIPE.

2. IRRIGATION PIPING, VALVES AND SPRAY HEADS SHALL BE DENOTED FOR FUTURE REUSE WATER.

3. THIS IRRIGATION SYSTEM IS TO BE CONSIDERED A GUIDE ONLY AND NOT A DESIGN.

4. FINAL IRRIGATION SYSTEM AND WELL IS TO BE DESIGNED BY A QUALIFIED LANDSCAPER OR LANDSCAPE ARCHITECT.

5. FINAL IRRIGATION SYSTEM IS TO BE APPROVED BY THE CITY OF POOLER DPW DEPARTMENT.

4. THIS PLAN IS ASSUMING A ZONED SYSTEM OF 15 GPM PER ZONE WITH ZONING TIMERS AND CONTROLLERS. A SYSTEM WHICH IS CAPABLE OF SUPPLYING 25 PSI AT THE MAIN.

5. THIS PLAN IS ASSUMING A LOOPED MAIN OF 1 1/2" DIA.

6. THIS PLAN IS ASSUMING INDIVIDUAL WATER LAT'S OF 1" DIA.

LANDSCAPE NOTES:

1. ALL TREE PLANTING PRACTICES ARE TO BE IN ACCORDANCE WITH THE CITY OF PORT WENTWORTH'S MOST RECENT TREE ORDINANCE.

2. A HORIZONTAL SEPARATION OF 10 FEET (min.) SHALL BE MAINTAINED BETWEEN PROPOSED TREES AND ANY UTILITIES(existing or proposed) OR UNDER POWER LINES.

3. PLANTED TREES MUST MEET OR EXCEED THE MINIMUM SIZES AT PLANTING IN ORDER FOR TREE QUALITY POINTS:

LARGE HARDWOOD TREE SPECIES	*3" CALIPER (diameter of stem measured six inches above the ground)*
CONIFERS, MEDIUM TREE SPECIES, SMALL TREE SPECIES,	*1" CALIPER*
SHRUBS	*3 GALLON*

4. AREAS USED FOR TREE PLANTING AREAS SHALL NOT BE USED FOR STORAGE, PARKING, ETC.

~~*5. TREE POINTS SHALL BE PURCHASED FROM CITY OF PORTWENTWORTH IF NECESSARY TO OBTAIN THE REQUIRED NUMBER OF POINTS.*~~

6. ALL DISTURBED AREAS NOT COVERED BY STRUCTURES, PAVING OR LANDSCAPING SHALL BE GRASSED.

7. ALL PLANT BEDS AND TREE RINGS SHALL BE MULCHED WITH 3" OF PINE STRAW, SHREDDED WOOD CHIPS OR PINE BARK.

8. IRRIGATION NOTES :

A. A HOSE BIBB FOR WATERING PLANTS IS TO BE LOCATED WITHIN 100' OF EACH PLANT. SEE PLANS FOR LOCATIONS.

SCALE: 1" = 20'

0 20' 40' 50'

REVISIONS

BOSWELL DESIGN SERVICES, INC.
OFFICE : 4700 EAST HIGHWAY 80
Unit K, Suite 104
MAILING : 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED: ---
DRAWN: MAB
CHECKED: ---
DATE : NOV. 26, 2024
JOB NO. ---
SCALE: as shown

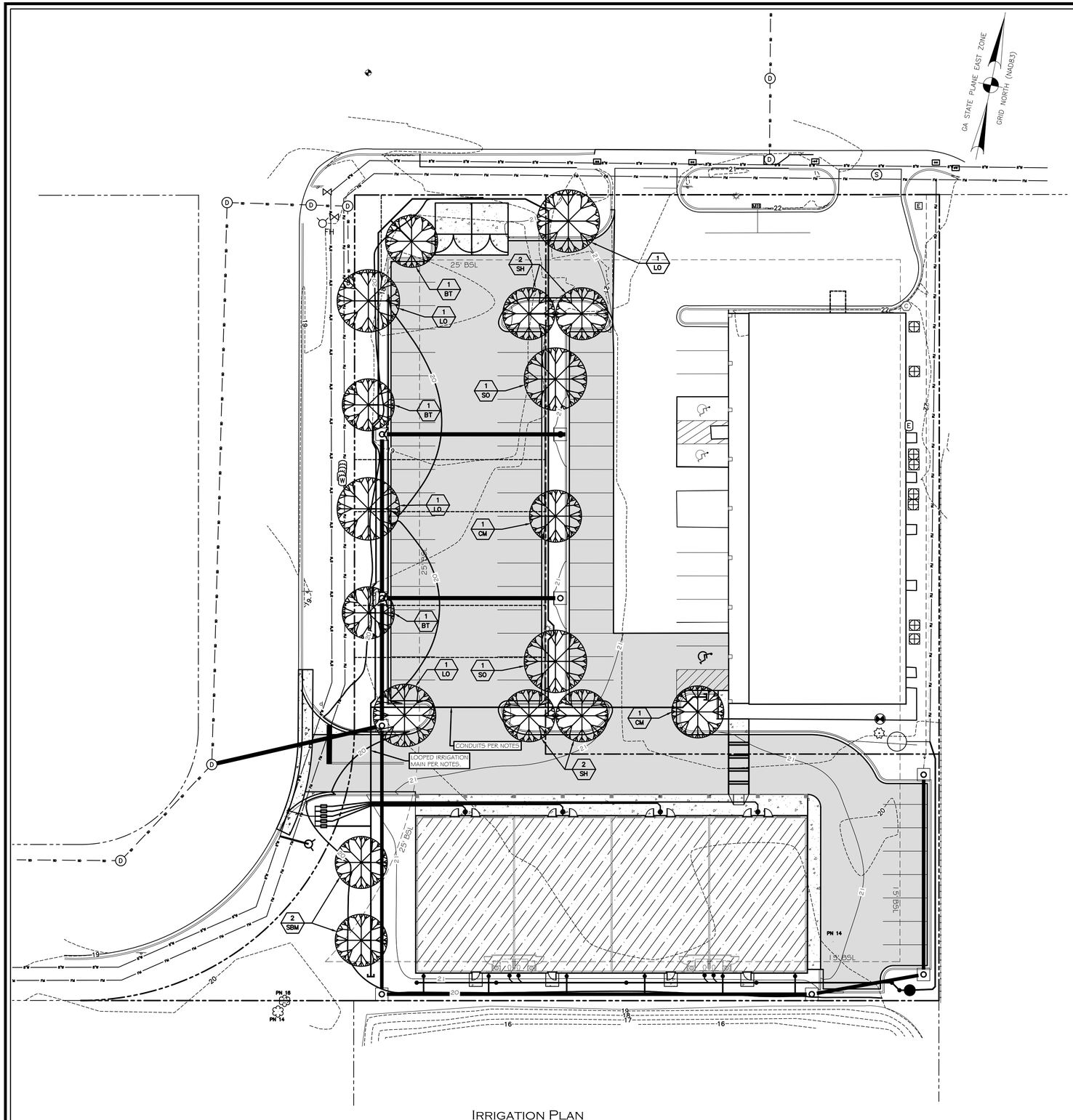
SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

LANDSCAPE PLAN, NOTES AND DETAILS

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED
No. 28372
PROFESSIONAL
11-26-24
ENGINEER
MARK A. BOSWELL

DRAWING NUMBER
C-8
8 OF 28 SHEETS



Irrigation Plan

1" = 20'

Special / General Irrigation Notes :

1. IRRIGATION PIPE SHALL BE PURPLE PIPE.

2. IRRIGATION PIPING, VALVES AND SPRAY HEADS SHALL BE DENOTED FOR FUTURE REUSE WATER.

3. THIS IRRIGATION SYSTEM IS TO BE CONSIDERED A GUIDE ONLY AND NOT A DESIGN.

4. FINAL IRRIGATION SYSTEM ~~AND WELL~~ IS TO BE DESIGNED BY A QUALIFIED LANDSCAPER OR LANDSCAPE ARCHITECT.

5. FINAL IRRIGATION SYSTEM IS TO BE APPROVED BY THE CITY OF POOLER ENGINEERING DEPARTMENT.

4. THIS PLAN IS ASSUMING A ZONED SYSTEM OF 50 GPM PER ZONE WITH ZONING TIMERS AND CONTROLLERS.

5. THIS PLAN IS ASSUMING INDIVIDUAL WATER LAT'S OF 1" DIA AND 2" IRRIGATION MAIN.

6. PROVIDE AND INSTALL (1) 4" SCH 40 PVC CONDUIT & (1) 2" SCH. 40 PVC CONDUIT UNDER ALL PARKING LOT PAVEMENT CROSSINGS.

7. PROVIDE BLOW OFF IN PLASTIC METER BOX AT ALL DEAD ENDS FOR IRRIGATION MAIN FLUSHING.

8. PROVIDE IRRIGATION TO ALL PLANTS, SHRUBS, SOD, ETC.

9. IRRIGATION HEADS FOR SOD SHALL PROVIDE HEAD TO HEAD COVERAGE.

10. MOUNT IRRIGATION CONTROLLER ON SIDE OF BUILDING.

SCALE: 1" = 20'

0 20' 40' 50'

REVISIONS

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LAHBOS@Bellsouth.net

DESIGNED: ---
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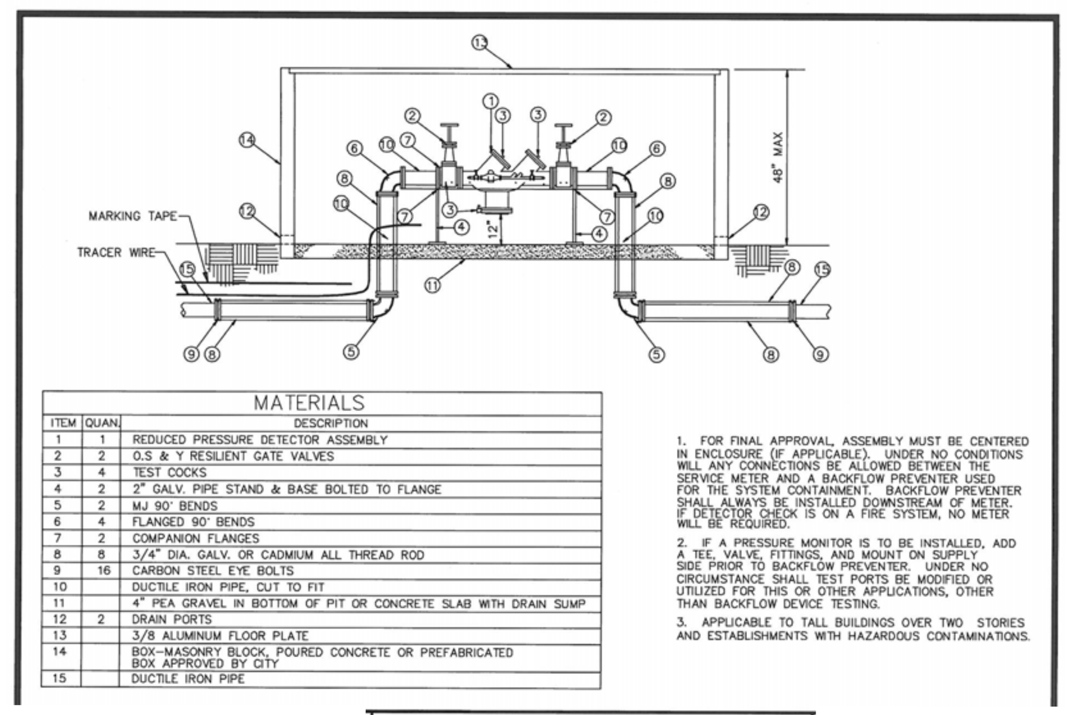
CHECKED: ---
DATE : NOV. 26, 2024
JOB NO. ---
SCALE: as shown

SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

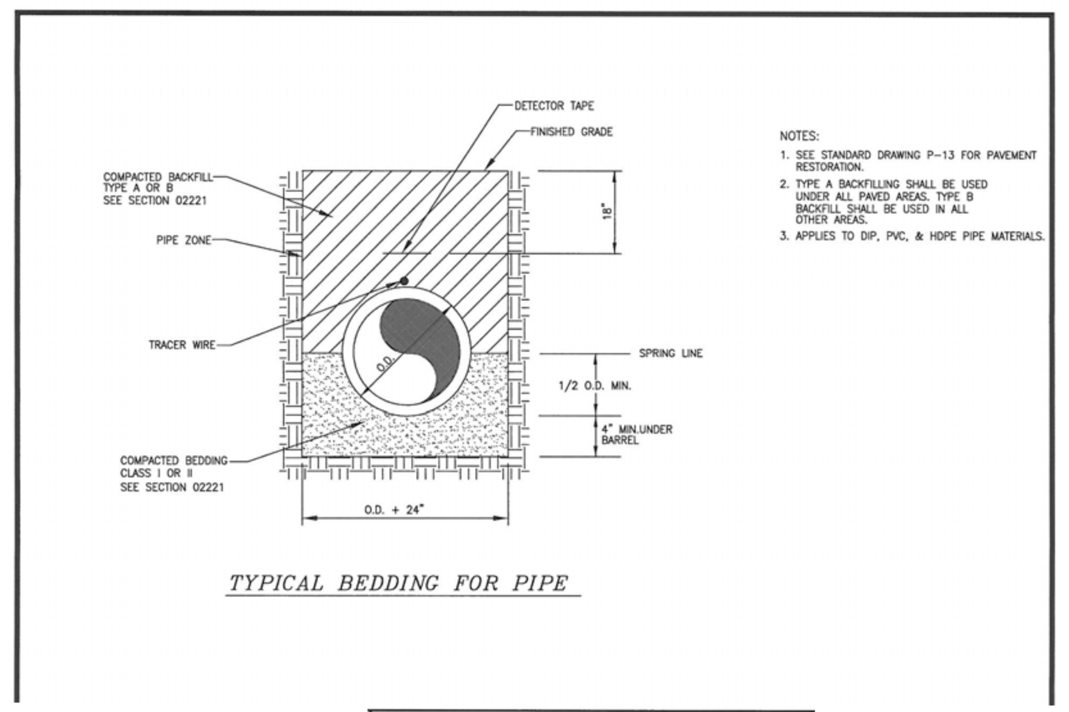
IRRIGATION PLAN

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER
1-800-282-7411

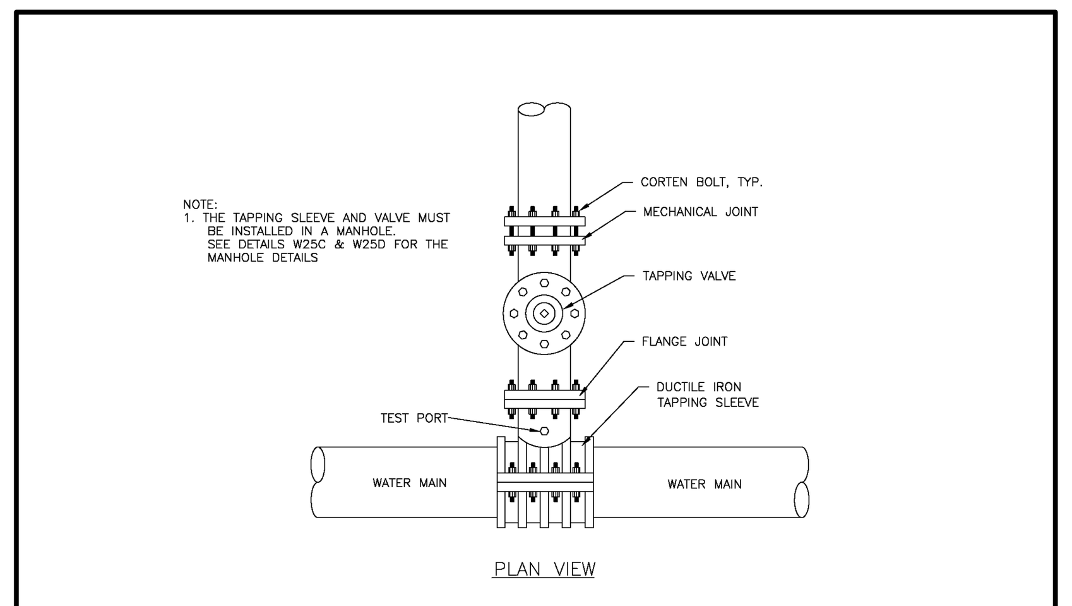
DRAWING NUMBER
C-9
9 OF 28 SHEETS



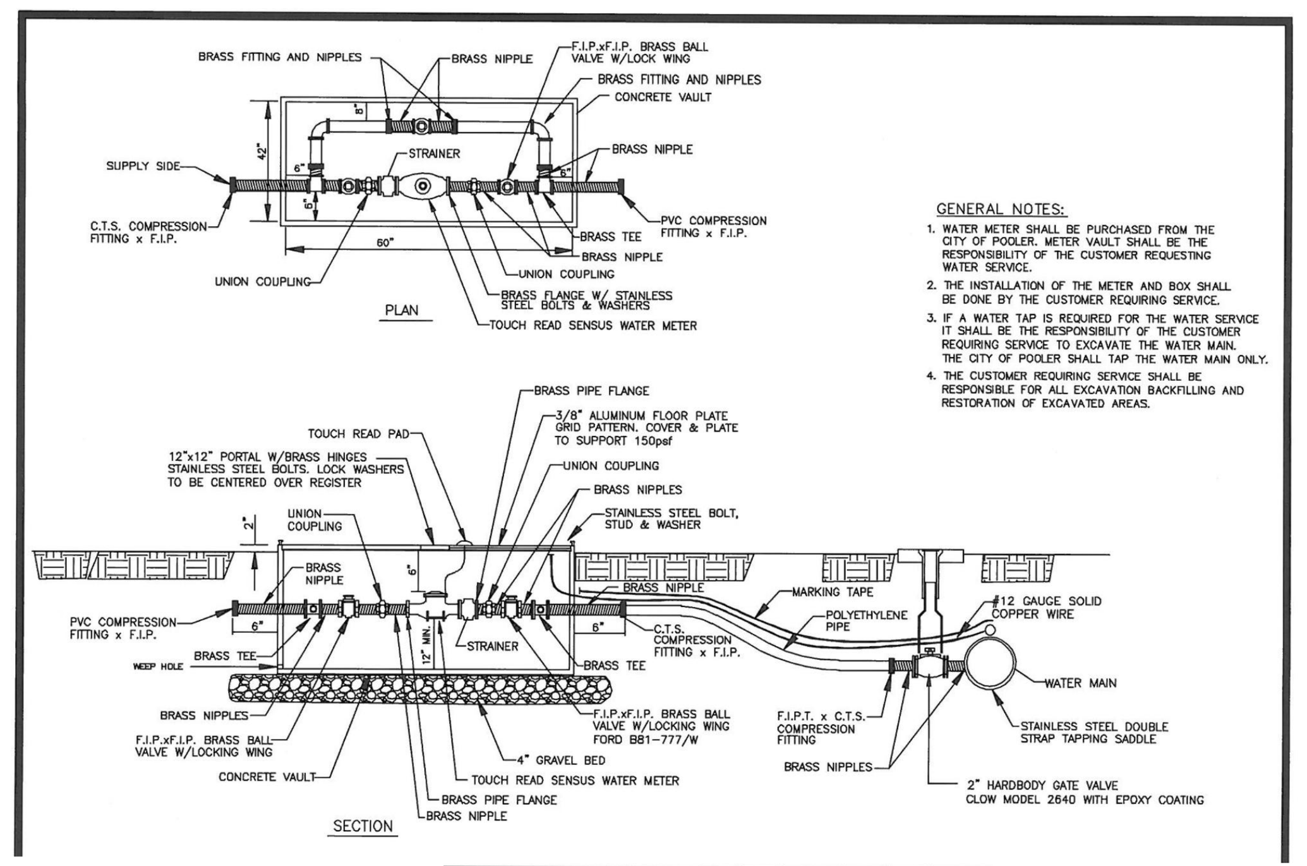
REDUCED PRESSURE DETECTOR ASSEMBLY FOR FIRE SYSTEM



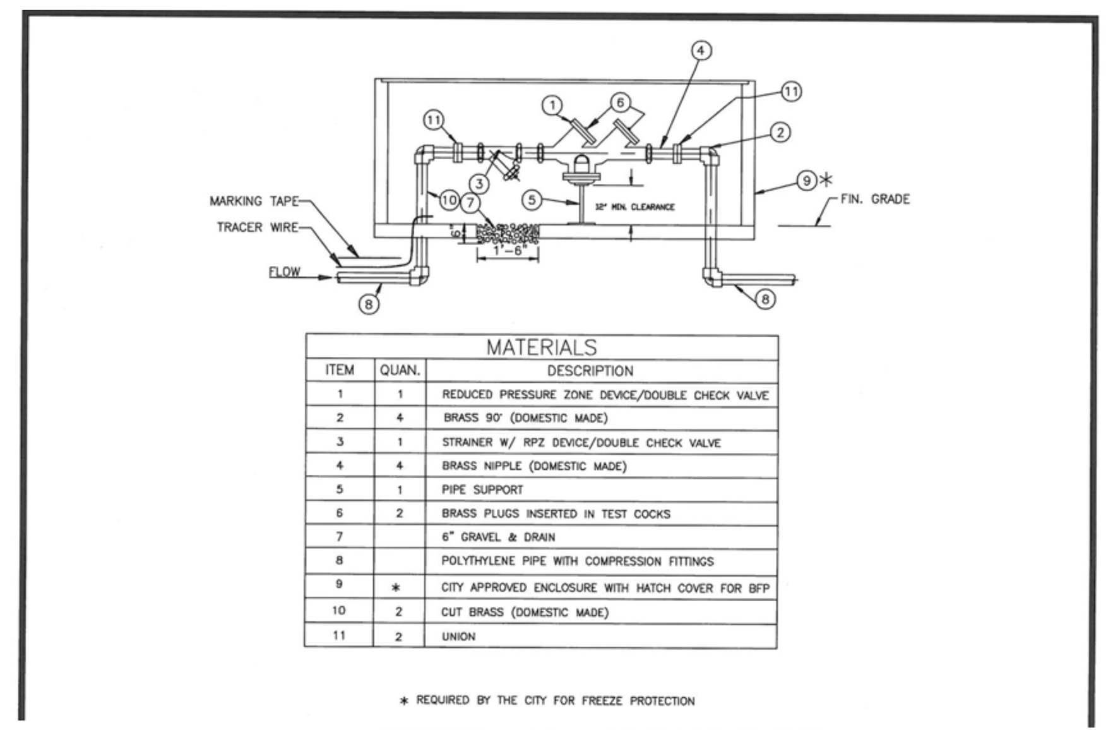
PIPE BEDDING DETAIL



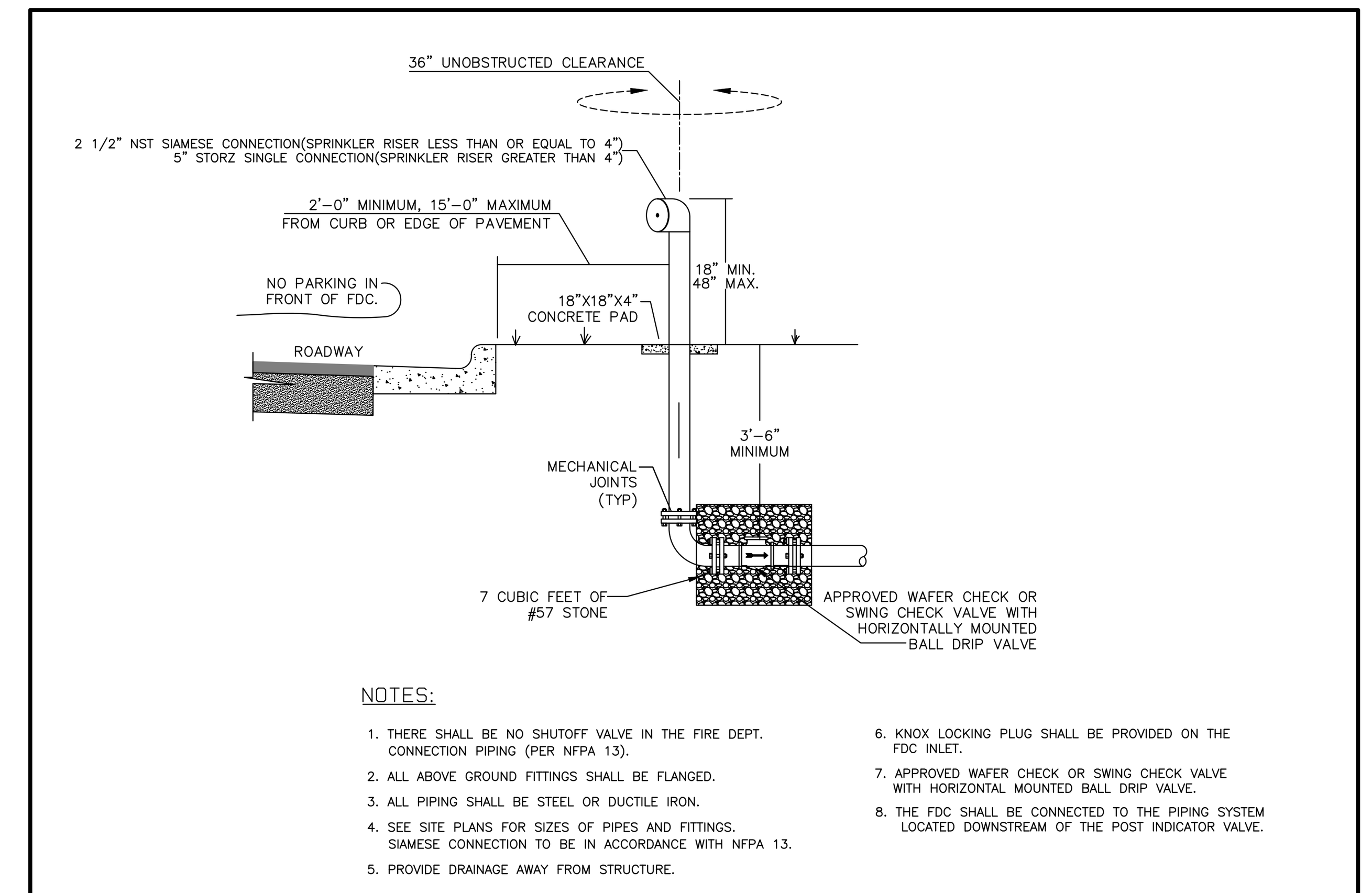
TAPPING SLEEVE DETAIL



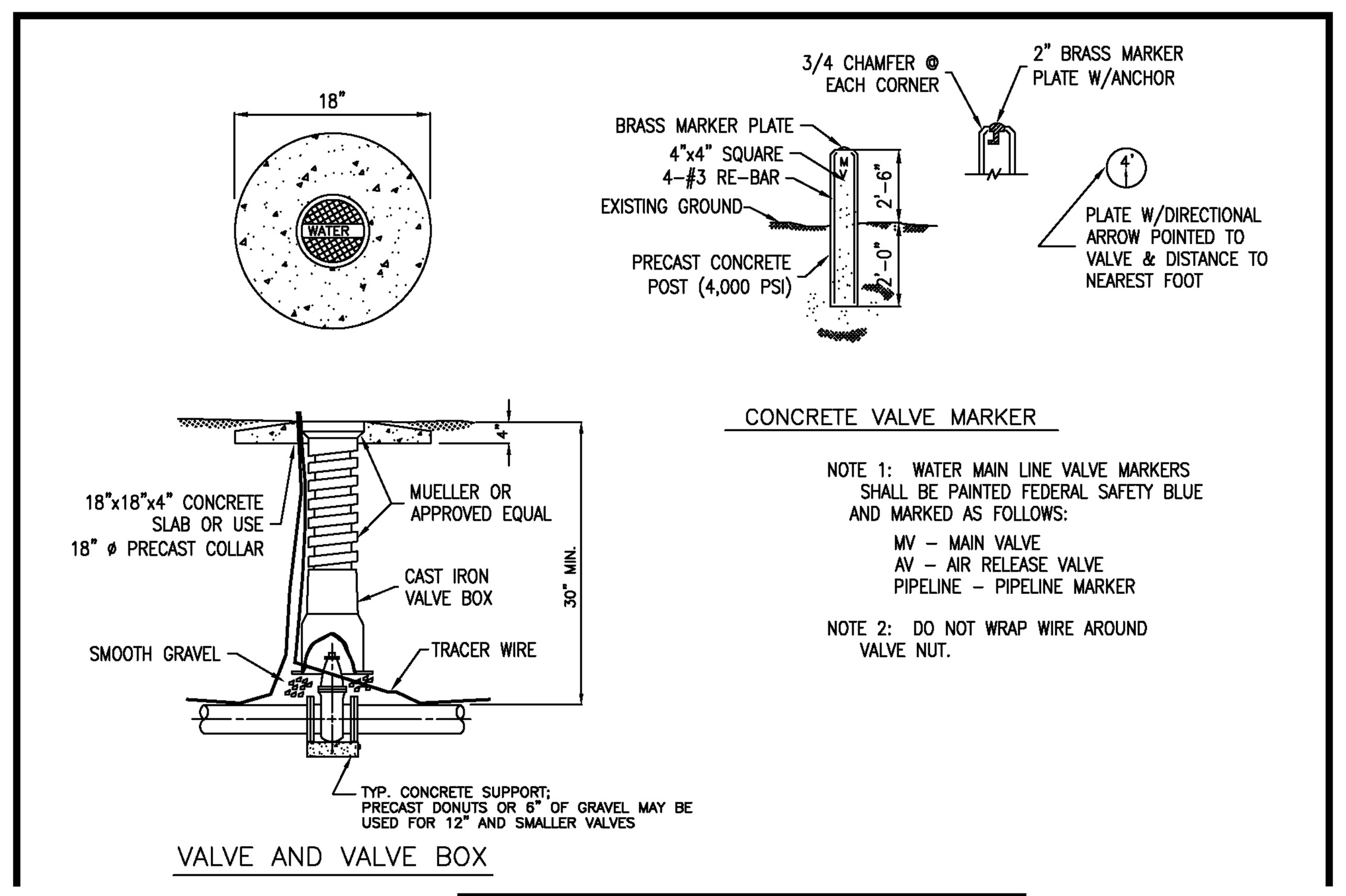
WATER METER INSTALLATION 2" SERVICE PIPE & 1-1/2" & 2" WATER METERS DOMESTIC



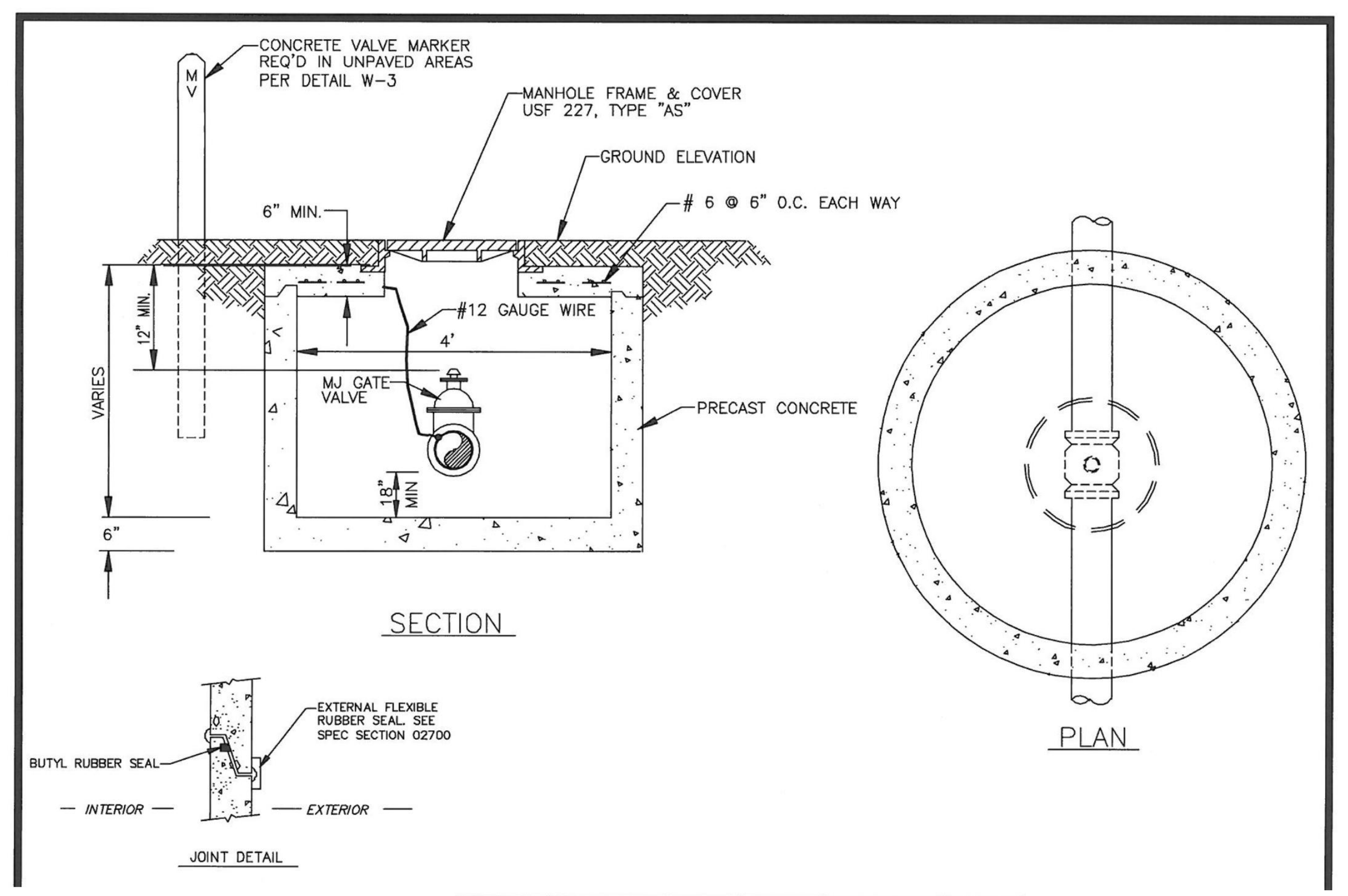
BACKFLOW PREVENTER DETAIL 3/4", 1", 1-1/2", 2"



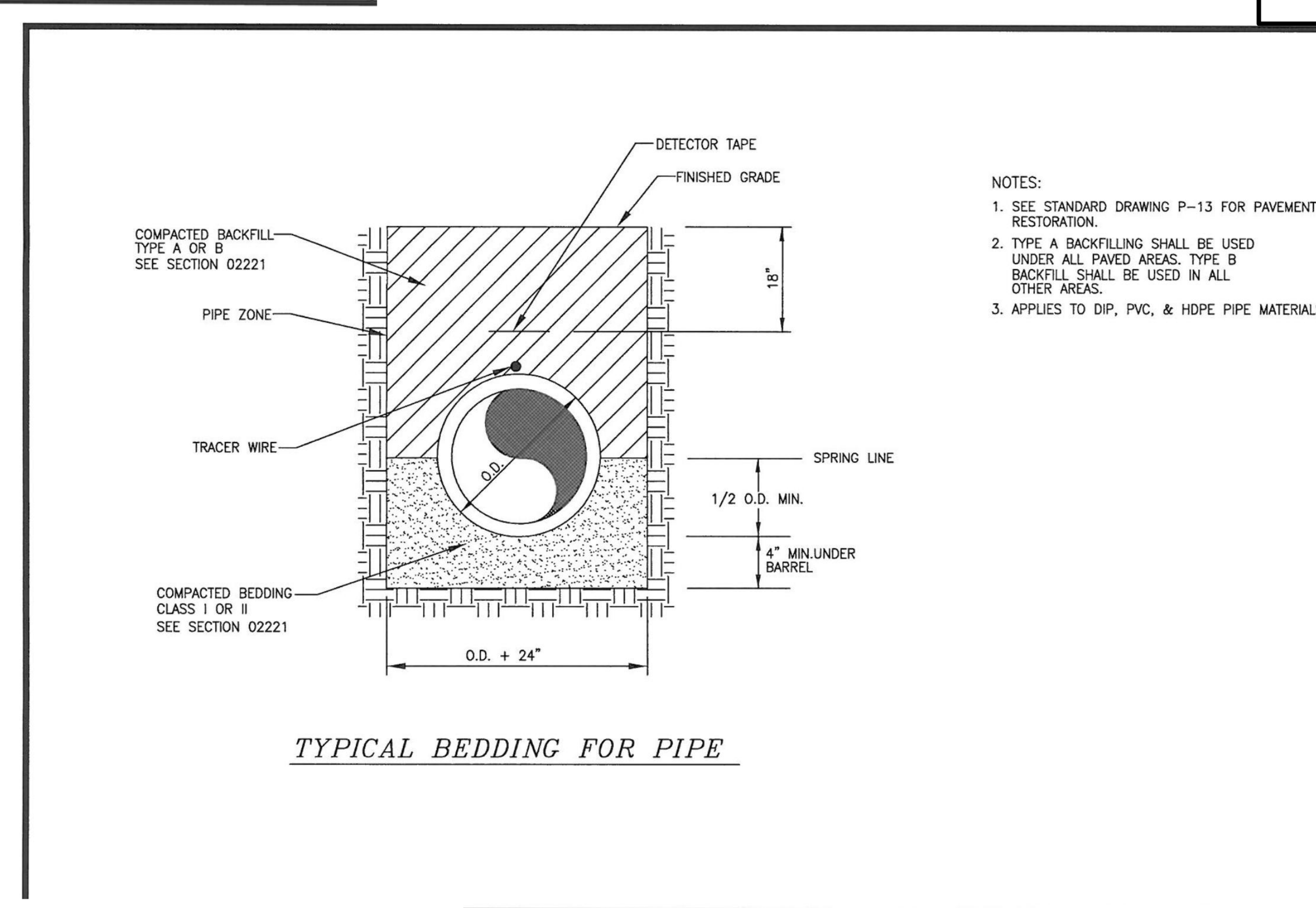
FREE STANDING FIRE DEPARTMENT CONNECTION



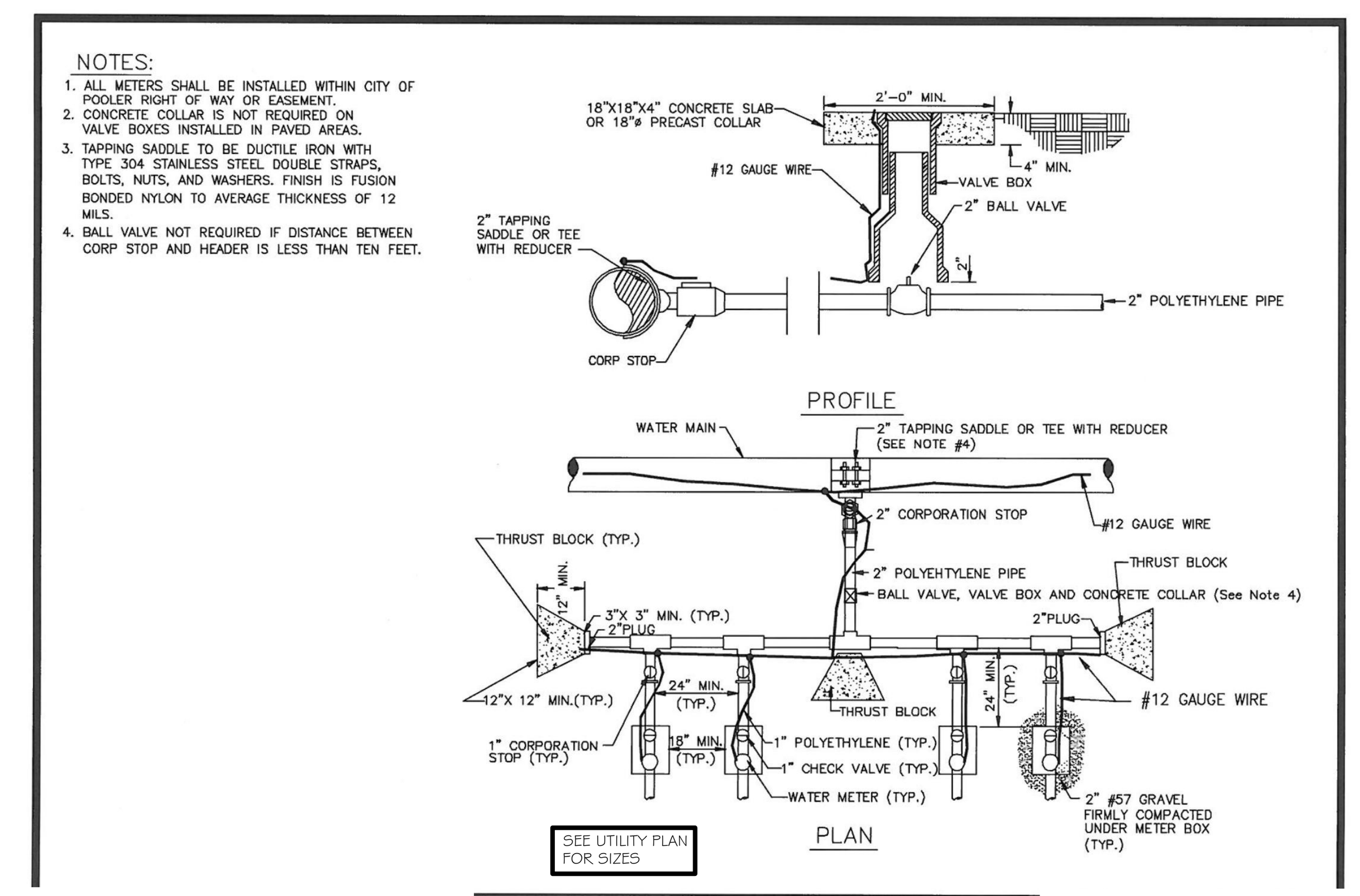
VALVE DETAIL



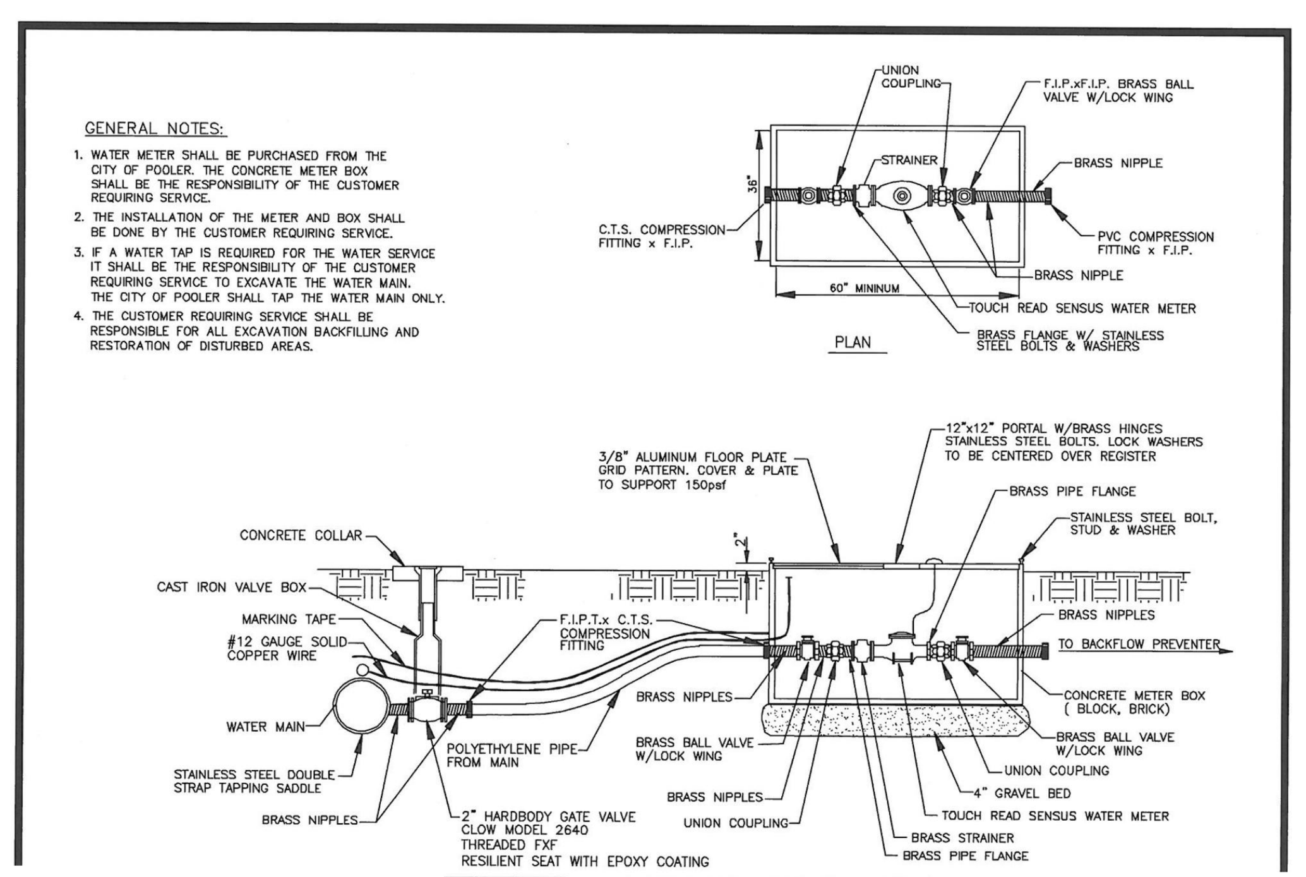
VALVE MANHOLE FOR 4" TO 8" GATE VALVES



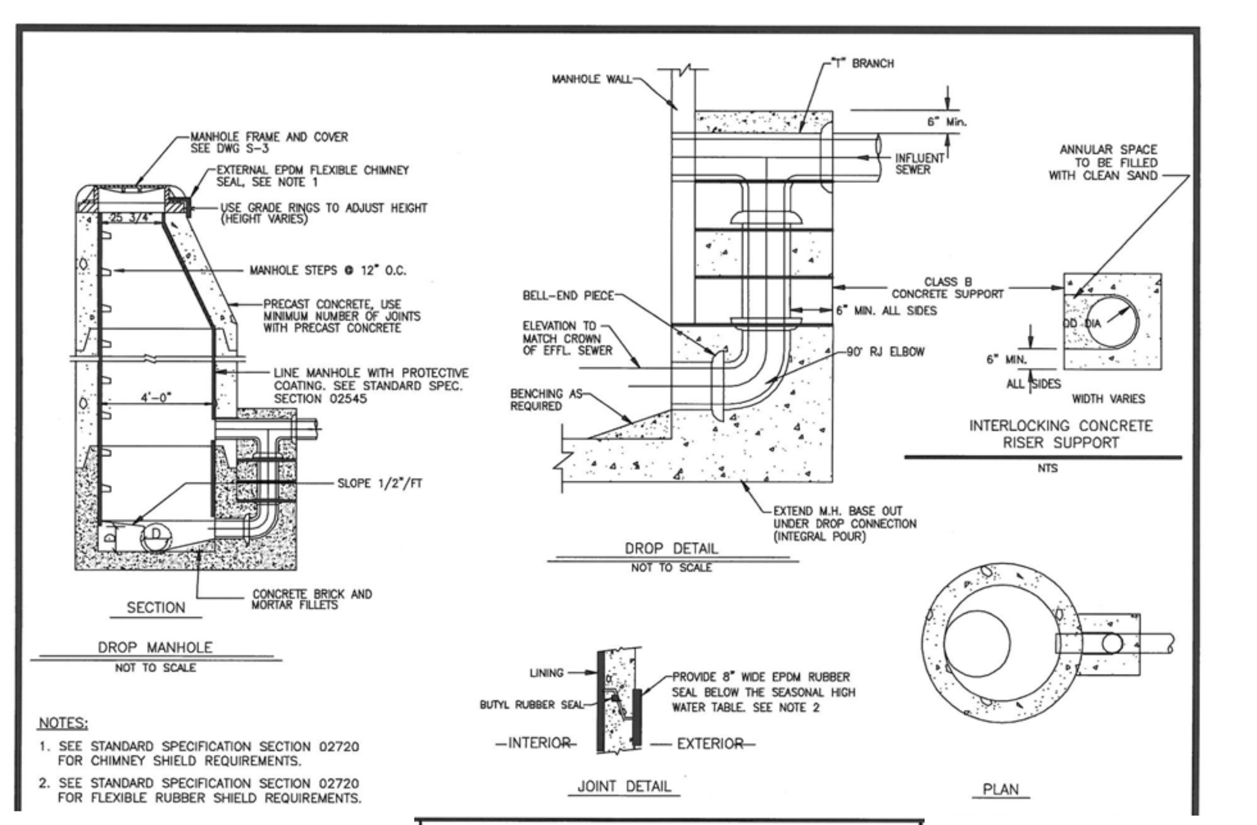
PIPE BEDDING DETAIL



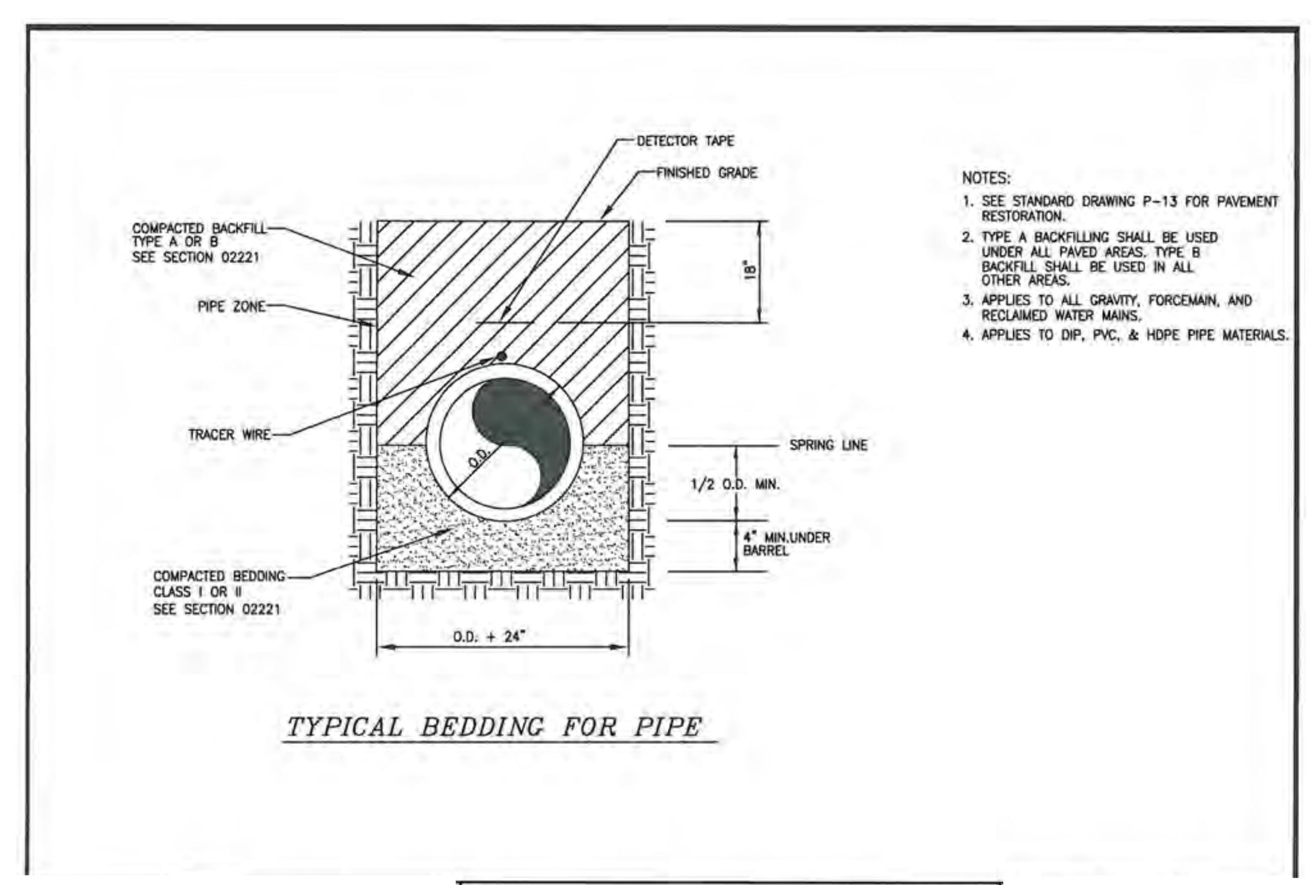
MANIFOLD FOR MULTIPLE 3/4" OR 1" METER INSTALLATION



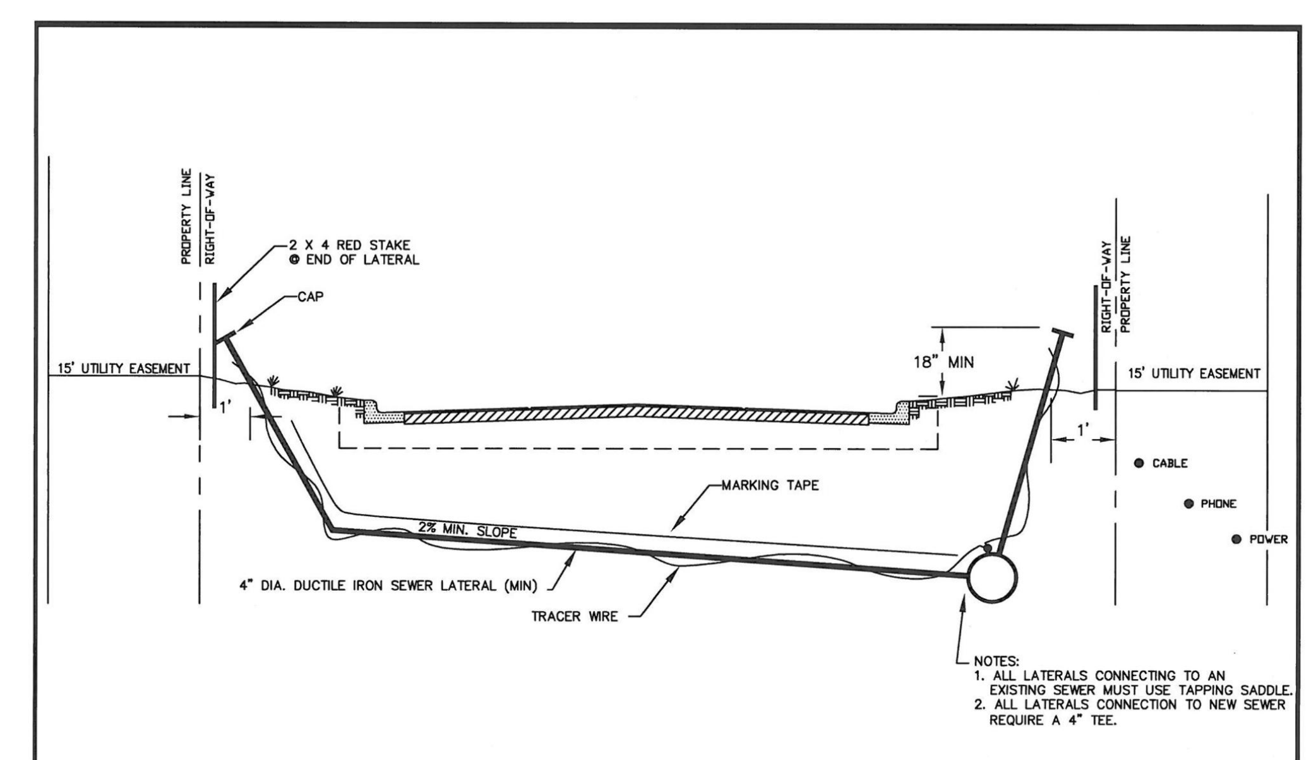
WATER METER INSTALLATION 2" SERVICE PIPE & 1-1/2" & 2" WATER METERS IRRIGATION ONLY



OUTSIDE DROP INTO NEW MANHOLE



PIPE BEDDING DETAIL



SEWER LATERAL DETAIL

Tracer Wire Notes :

1. ALL WATER MAINS, WATER LATERALS AND FIRE HYDRANTS ARE TO HAVE A #12 GAUGE SOLID COPPER WIRE INSTALLED WITH EACH UTILITY. IT SHALL BE INSTALLED IN SUCH A MANNER THAT THE WIRES ARE CONNECTED TO EACH OTHER AND CAN BE CONTINUOUSLY TRACED. THE WATER DEPARTMENT SHALL CONDUCT A TRACING TEST TO ENSURE COMPLIANCE.

Special Ordinance Note :

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REVISIONS

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Unit N, Suite 1
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SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED	DRAWN	CHECKED
---	MAB	---

DATE : NOV. 26, 2024
JOB NO. : ---
SCALE : as shown

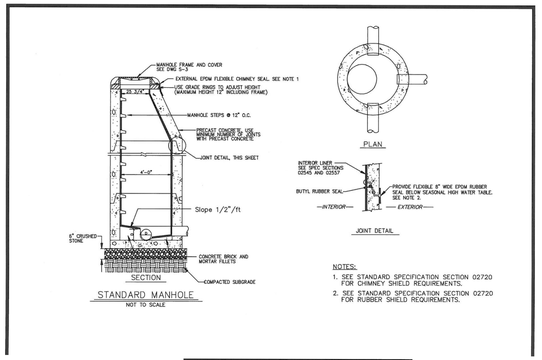
Shopping Center Development Sitework Plans
0 Old Richmond Road
Port Wentworth, GA 31407
For
Nishant Randerwala
Port Wentworth, GA

DETAILS

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER 1-800-282-7411

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 28372 11-26-24 MARK A. BOSWELL

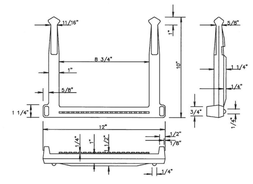
Drawing Number
C-10
10 of 28 sheets



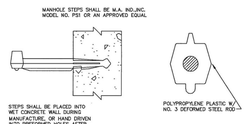
STANDARD MANHOLE
NOT TO SCALE

NOTES:
1. SEE STANDARD SPECIFICATION SECTION 02720 FOR CHIMNEY SHIELD REQUIREMENTS.
2. SEE STANDARD SPECIFICATION SECTION 02720 FOR RUBBER SHIELD REQUIREMENTS.

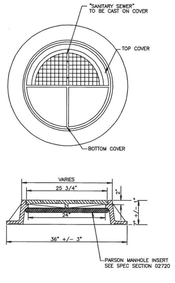
STANDARD MANHOLE



MANHOLE STEPS SHALL BE M.A. IND.,INC. MODEL NO. PS1 OR AN APPROVED EQUAL



MANHOLE STEP DETAIL



NOTES:
1: CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE, DISTORTION OR OTHER DEFECTS THEY SHALL BE SMOOTH AND WELL CLEANED BY SHOTBLASTING OR BY SOME OTHER APPROVED METHOD. CASTING SHALL NOT BE PAINTED.

2: MATERIALS USED IN THE MANUFACTURE OF CASTINGS SHOULD CONFORM TO AASHTO M105/ASTM A48, CLASS 35B OF ASTM A48, CLASS 20, FOR GRAY IRON.

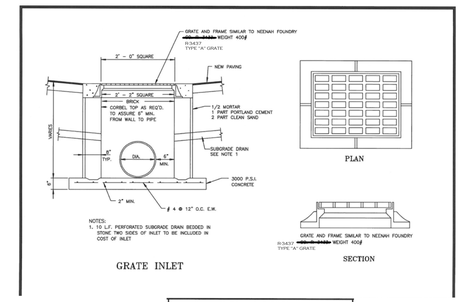
3: ALL CASTINGS SHALL BE MANUFACTURED TRUE TO PATTERN; COMPONENT PARTS SHALL FIT TOGETHER IN A SATISFACTORY MANNER. ROUND FRAMES AND COVERS SHALL BE OF NON-ROCKING DESIGN, OR SHALL HAVE MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING UNDER TRAFFIC. FRAME SHALL BE SUITABLE FOR CAST IRON OR STEEL RISER RING FOR UPWARD ADJUSTMENT OF COVER. CLEAR OPENING SHALL BE 24".

4: MANHOLE COVER SHALL BE 25-3/4" IN DIAMETER AND SHALL BE 2-INCHES THICK AT THE BEARING SURFACE.

5. CASTINGS SHALL BE PROVIDED WITH THE INSCRIPTION "SANITARY SEWER" CAST INTO THE COVER IN LETTERING AT LEAST 2-INCHES HIGH. MANUFACTURER'S NAME , IF IT APPEARS ON THE COVER, SHALL BE CONFINED TO THE PERIPHERY.

6. MANHOLE COVERS AND FRAMES SHALL BE USF 227, TYPE "AS" OR EQUAL.

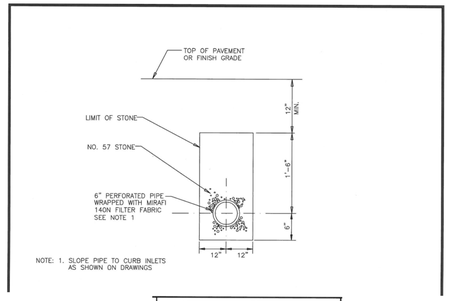
MANHOLE COVER & FRAME DETAIL



NOTES:
1. 10 L.F. PERFORATED SUBGRADE DRAIN BEDDED IN STONE TWO SIDES OF INLET TO BE INCLUDED IN COST OF INLET

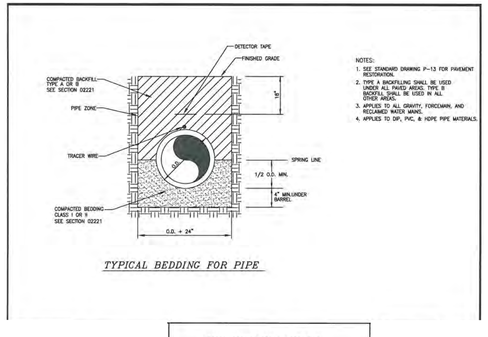
GRATE INLET

GRATE INLET W/ FRAME



NOTE: 1. SLOPE PIPE TO CURB INLETS AS SHOWN ON DRAWINGS

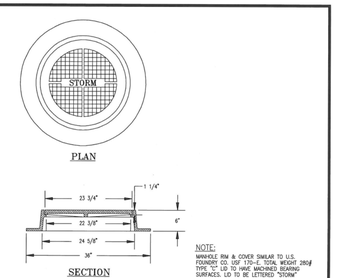
SUBGRADE DRAIN



NOTES:
1. SEE STANDARD DRAWING P-13 FOR PAVEMENT TRENCHING.
2. TYPE A BACKFILLING SHALL BE USED UNDER ALL PAVED AREAS. TYPE B BACKFILL SHALL BE USED IN ALL OTHER AREAS.
3. APPLIES TO ALL GRAVITY, FORCEMAIN, AND RECLAIMED WATER MAINS.
4. APPLIES TO DIP, PVC, & HDPE PIPE MATERIALS.

TYPICAL BEDDING FOR PIPE

PIPE BEDDING DETAIL



NOTE:
MANHOLE RIM & COVER SIMILAR TO U.S. FOUNDRY CO. USF 170-C TOTAL WEIGHT 280# TYPE "C" LID TO HAVE MACHINED BEARING SURFACES. LID TO BE LETTERED "STORM" (NOT VENTED).

STORM MANHOLE RING & COVER

SPECIAL ORDINANCE NOTE :

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REVISIONS

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912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED	DRAWN	CHECKED
---	MAB	---

DATE : NOV. 26, 2024
JOB NO. ---
SCALE: as shown

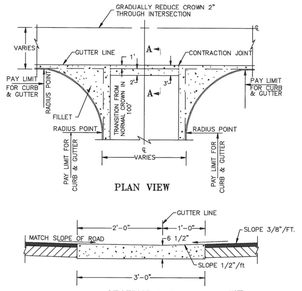
SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

DETAILS

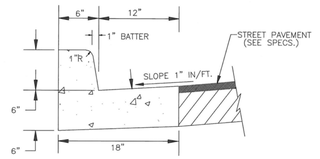
CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
GEORGIA UTILITIES PROTECTION CENTER SAVE BEFORE YOU DIG
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED No. 28372 PROFESSIONAL ENGINEER
11-26-24
MARK A. BOSWELL

DRAWING NUMBER
C-11
11 OF 28 SHEETS

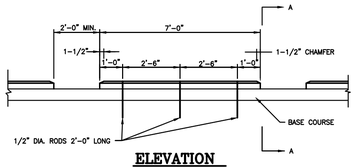


CONCRETE SWALE WITH FILLETS

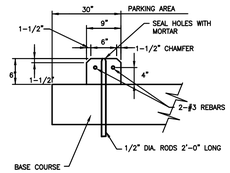


NORMAL GUTTER

18" CURB & GUTTER



ELEVATION

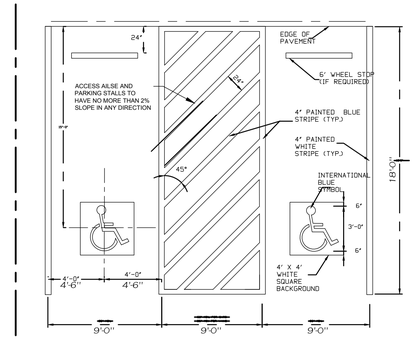


SECTION A-A

NOTE: ANCHOR RODS TO BE SLEEVED OR GREASED THRU CONCRETE CURBS TO PERMIT RELOCATION OF CURBS.

WHEEL STOP DETAIL

N.T.S.

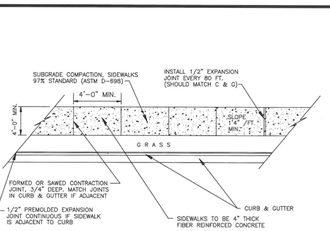


NOTE:

1. STRIPING AND CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND CITY OF POOLER CODES AND SPECIFICATIONS.

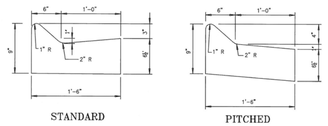
2. ALL PAVEMENT MARKINGS AND STRIPING IN THE RIGHT-OF-WAY SHALL BE THERMOPLASTIC.

ADA HANDICAP PARKING SPACE STRIPING DETAIL

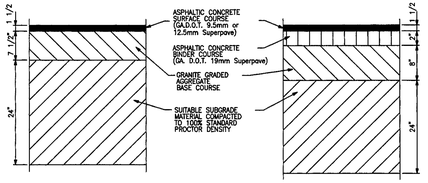


NOTE:
CONTRACTION JOINTS SPACING TO BE THE SAME AS WIDTH OF WALK.

SIDEWALK AND WALKWAY DETAILS

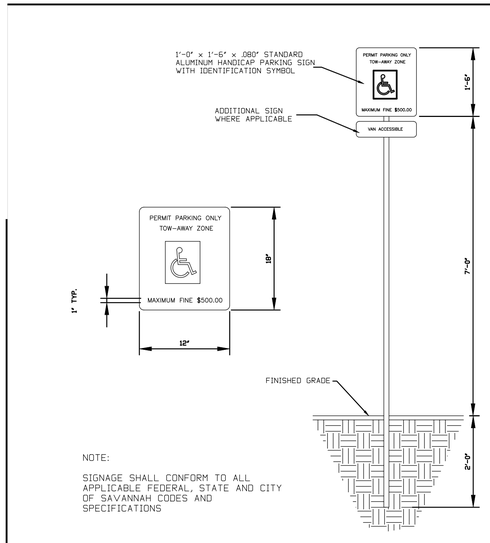


MOUNTABLE CONCRETE CURB & GUTTER



NOTES:
1. BITUMINOUS PRIME AND TACK COATS WILL BE APPLIED AS LISTED BELOW.
A. PRIME COAT SHALL BE APPLIED AT A RATE OF 0.25 GALLON PER SQUARE YARD TO THE SURFACE OF ALL GRANITE BASE COURSES.
B. TACK COAT SHALL BE APPLIED AT A RATE OF 0.10 GALLONS PER SQUARE YARD TO THE SURFACE OF THE BINDER COURSE BEFORE PLACEMENT OF SURFACE COURSE.
2. REFER TO PAVING PLAN FOR LOCATION OF STANDARD AND HEAVY DUTY PAVEMENTS.

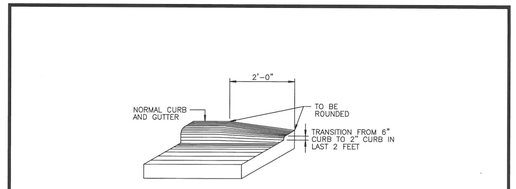
PRIVATE PROPERTY PAVEMENT SECTIONS



NOTE:

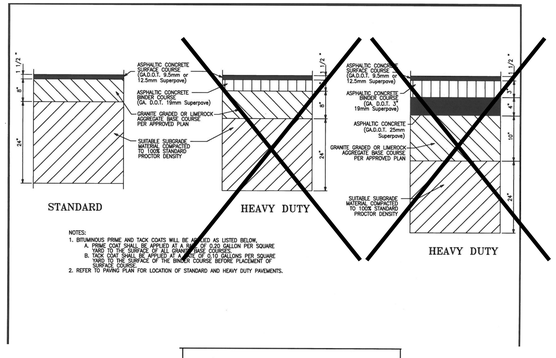
SIGNAGE SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND CITY OF SAVANNAH CODES AND SPECIFICATIONS

HANDICAP PARKING SIGN DETAIL



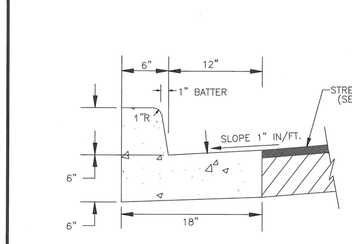
NOTE: THIS OCCURS AT END OF CURB AND GUTTER WHERE CALLED FOR ON PLANS

FEATHERING OF CONCRETE CURB & GUTTER



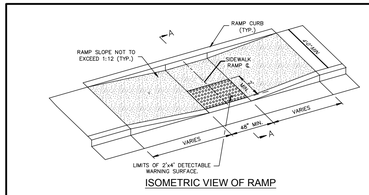
NOTES:
1. BITUMINOUS PRIME AND TACK COATS WILL BE APPLIED AS LISTED BELOW.
A. PRIME COAT SHALL BE APPLIED AT A RATE OF 0.25 GALLON PER SQUARE YARD TO THE SURFACE OF ALL GRANITE BASE COURSES.
B. TACK COAT SHALL BE APPLIED AT A RATE OF 0.10 GALLONS PER SQUARE YARD TO THE SURFACE OF THE BINDER COURSE BEFORE PLACEMENT OF SURFACE COURSE.
2. REFER TO PAVING PLAN FOR LOCATION OF STANDARD AND HEAVY DUTY PAVEMENTS.

TYPICAL PAVEMENT SECTIONS

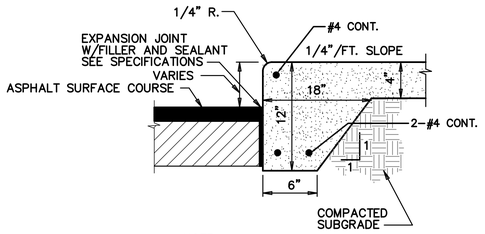


NORMAL GUTTER

18" CURB & GUTTER



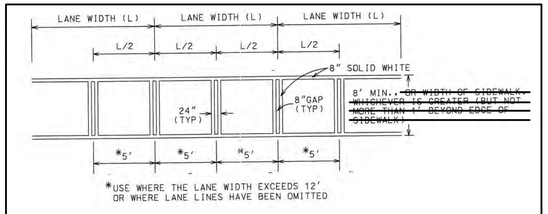
TYPE "B" HANDICAP RAMP



NOTE:
DOES NOT APPLY TO HANDICAP PARKING SPACES AND RAMPS – SEE PGD SHEET FOR GRADES

MONOLITHIC SIDEWALK

NOT TO SCALE



*USE WHERE THE LANE WIDTH EXCEEDS 12' OR WHERE LANE LINES HAVE BEEN OMITTED

PAINTED CROSSWALK DETAIL

SPECIAL ORDINANCE NOTE :

1. IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF POOLER'S ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTH STANDARDS ARE TO TAKE PRECEDENCE.

REVISIONS

BOSWELL DESIGN SERVICES, INC.
OFFICE: 4700 EAST HIGHWAY 80
Unit K, Suite 104
MAILING: 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED: ---
DRAWN: MAB
CHECKED: ---
DATE: NOV. 26, 2024
JOB NO. ---
SCALE: as shown

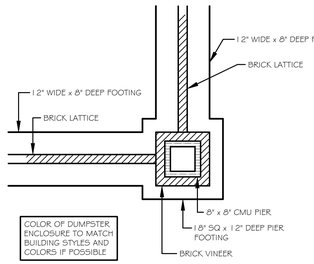
SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

DETAILS

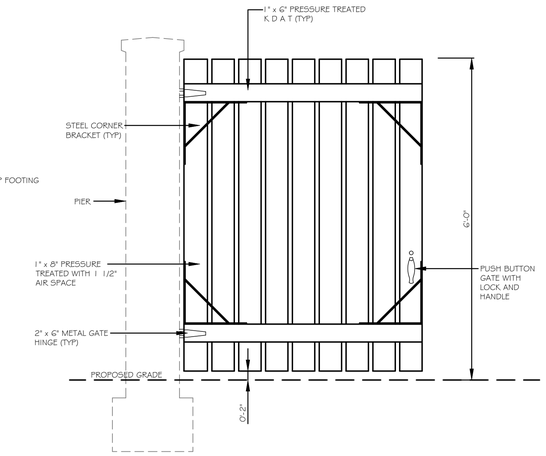
CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED
No. 28372
PROFESSIONAL
11-26-24
ENGINEER
MARK A. BOSWELL

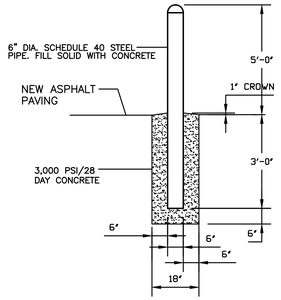
DRAWING NUMBER
C-12
12 OF 28 SHEETS



DUMPSTER FENCE PLAN VIEW
3/4" = 1'-0"

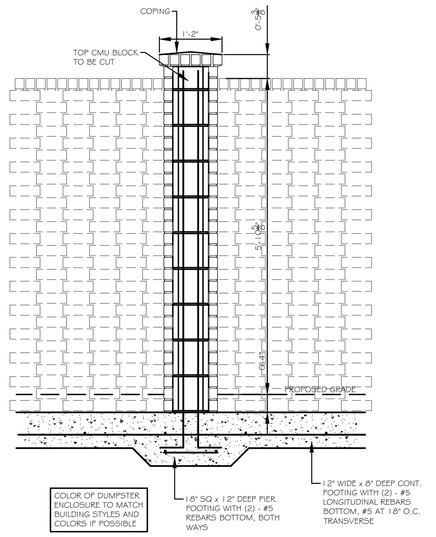


DUMPSTER FENCE GATE DETAIL
3/4" = 1'-0"

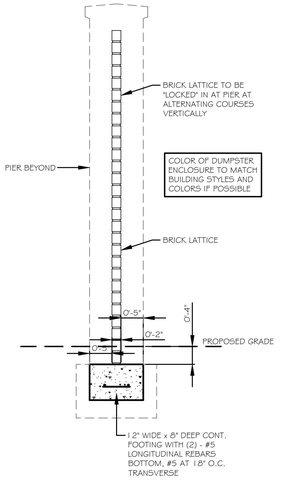


NOTE: PAINT FINISH COAT: 2 COATS T Thermec– GLOSS OR 2 COATS V 34 SERIES OR 2 COATS C–5550–5552 EPOXIDE – TOTAL DRY FILM THICKNESS 3.0 TO 5.0 MILS. PRIME COAT AS PER PAINT MANUFACTURER'S INSTRUCTIONS. COLOR TO BE YELLOW OR AS DIRECTED BY THE ENGINEER.

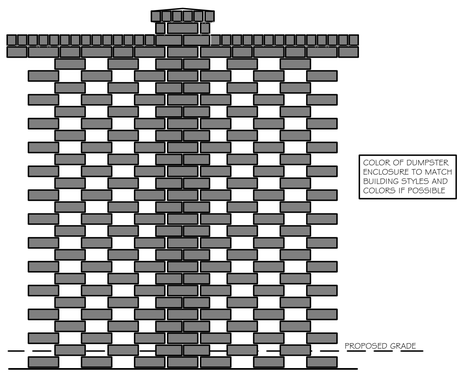
BOLLARD DETAIL
NOT TO SCALE



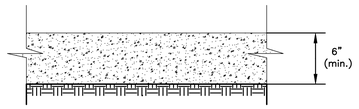
DUMPSTER FENCE PIER SECTION
3/4" = 1'-0"



DUMPSTER FENCE LATTICE SECTION
3/4" = 1'-0"



DUMPSTER FENCE ELEVATION
3/4" = 1'-0"

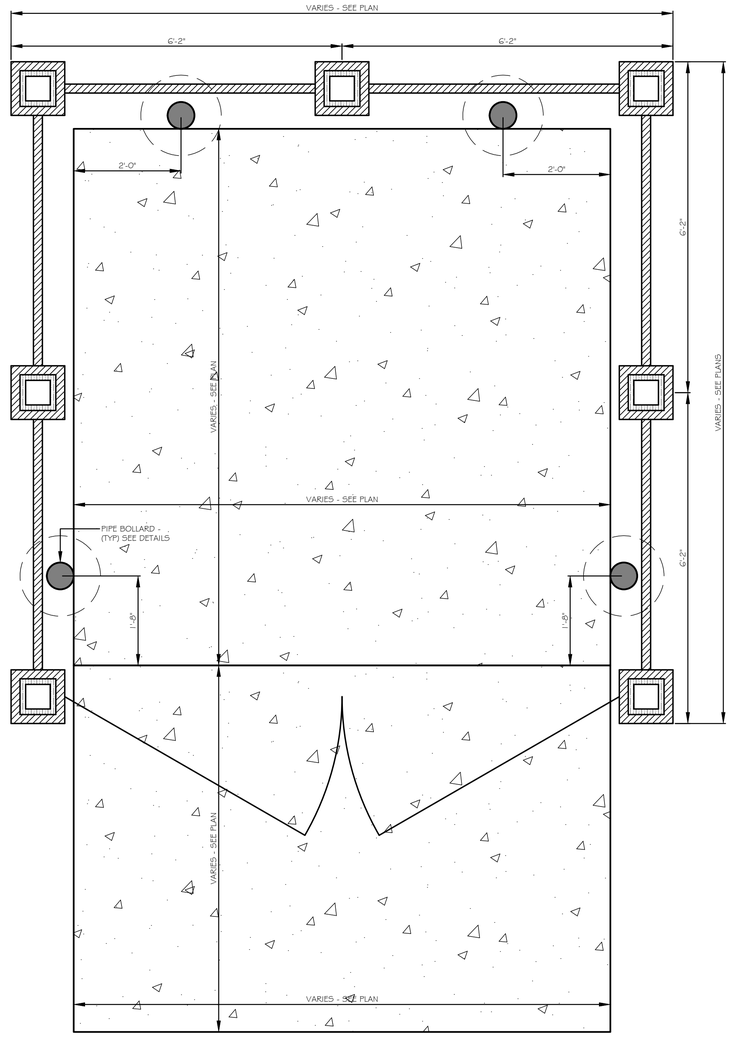


APPROACH NOTES :

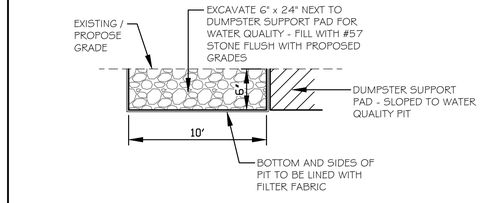
1. DRIVEWAY SUBGRADE SHALL BE COMPACTED TO 100% AS PER SECTION 02200, PART 3.01 B.

2. MINIMUM COMPRESSIVE STRENGTH SHALL BE 5,000 psi AS PER SECTION 03300, PART 3.2 IN CITY OF SAVANNAH R.O.W. AND ELSEWHERE.

DUMPSTER PAD AND APPROACH PAD DETAIL



DUMPSTER AREA PLAN
3/4" = 1'-0"



DUMPSTER PAD WATER QUALITY PIT DETAIL
NOT TO SCALE

SPECIAL ORDINANCE NOTE :

1. IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF POOLERS ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF POOLER, STANDARDS ARE TO TAKE PRECEDENCE.

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

REVISIONS

BOSWELL DESIGN SERVICES, INC.
OFFICE : 4700 EAST HIGHWAY 80
Unit K, Suite 101
MAILING : 105 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED	DRAWN	CHECKED
---	MAB	---

DATE : NOV. 26, 2024
JOB NO. ---
SCALE: as shown

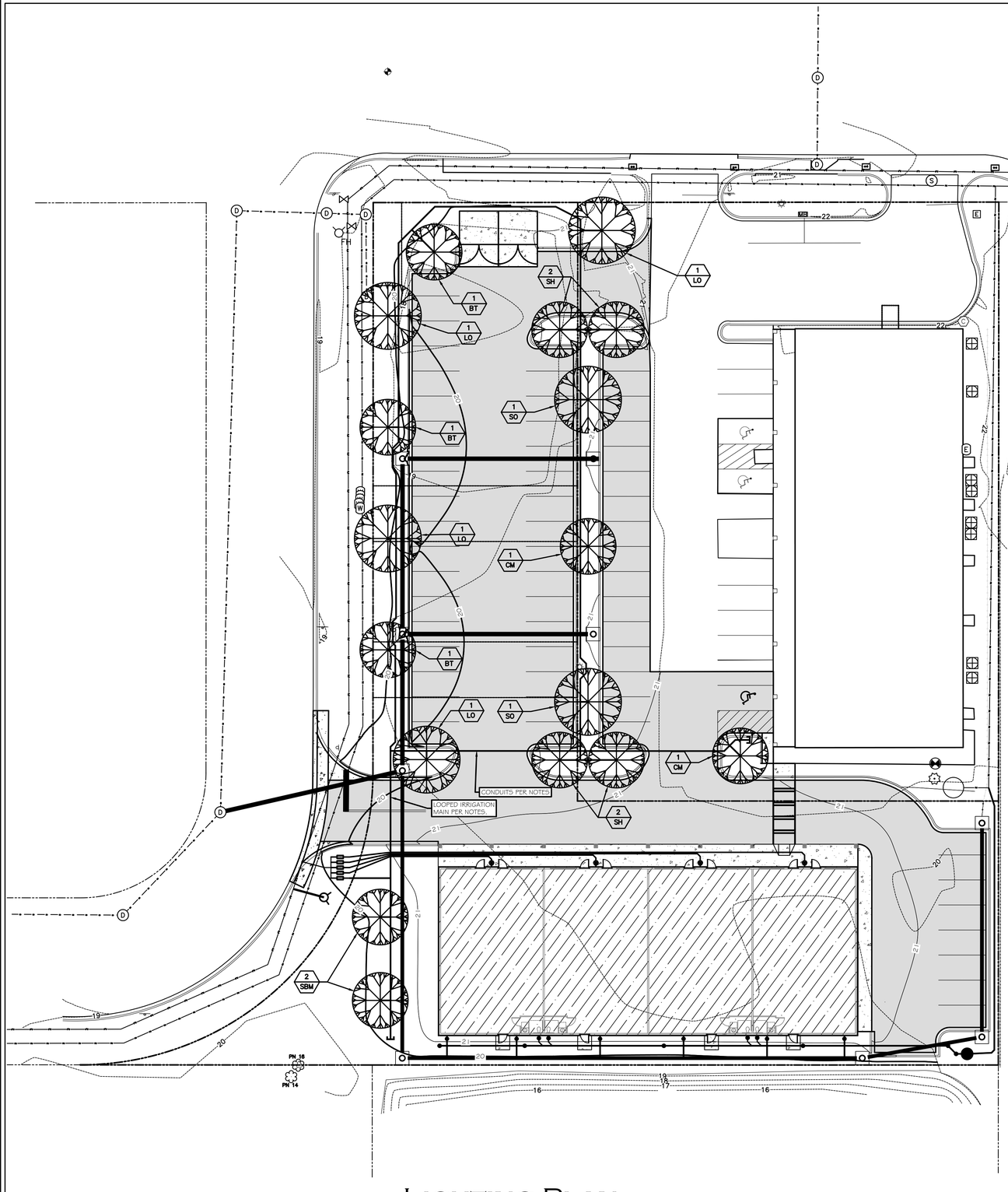
SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

DETAILS

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED No. 28372 PROFESSIONAL ENGINEER
Mark Boswell
11-26-24
MARK A. BOSWELL

DRAWING NUMBER
C-13
13 OF 28 SHEETS



Lighting Plan

Mounting Height Notes :

1. ~~MOUNTING HEIGHT FOR LAYDOWN YARD AREA LIGHTS ARE TO BE 30' MAX.~~
2. MOUNTING HEIGHT FOR BUILDING MOUNTED WALL PACKS ARE TO BE 15' MAX.

Site Lighting Ordinance Notes :

1. ALL SITE LIGHTING SHALL MEET IESNA (ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA STANDARDS.
2. MAXIMUM LIGHT LEVELS PERMITTED AT PROPERTY INE SHALL BE AS FOLLOWS :
   A. 0.5 FC AT ANY PROPERTY LINE ADJACENT TO A CONSERVATION OR RESIDENTIAL ZONING DISTRICT OR A CONFORMING RESIDENTIAL USE
   B. 1.0 FC AT ANY PROPERTY LINE ABUTTING ANY MIXED-USE OR NON-RESIDENTIAL ZONING DISTRICT
   C. 3.0 FC AT ANY PROPERTY LINE ALONG ANY STREET RIGHTS OF WAY

4 WALL PACKS MOUNTED ON BUILDING EXTERIOR

Final Lighting Plan is to be coordinated, designed and approved by Georgia Power

Special Ordinance Note :

IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF PORT WENTWORTH'S ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTH'S, STANDARDS ARE TO TAKE PRECEDENCE.

Site Lighting Notes :

1. PARKING AND SITE LIGHTING IS TO BE INSTALLED UTILIZING CUT OFF FIXTURES SO AS TO NOT CAUSE NEW LIGHT TO "SPILL OVER" ONTO ADJACENT PROPERTIES.
2. FINAL LIGHTING PLAN IS TO BE COORDINATED, AND SUPPLIED BY THE OWNER.
3. FINAL LIGHTING IS TO BE APPROVED BY THE CITY OF POOLER.

SCALE: 1" = 20'
0 20' 40' 50'

BOSWELL DESIGN SERVICES, INC.
OFFICE : 4700 EAST HIGHWAY 80
Unit K, Suite 4
MAILING : 105 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

REVISIONS

DESIGNED —
DRAWN MAB
CHECKED —
DATE : NOV. 26, 2024
JOB NO. —
SCALE: as shown

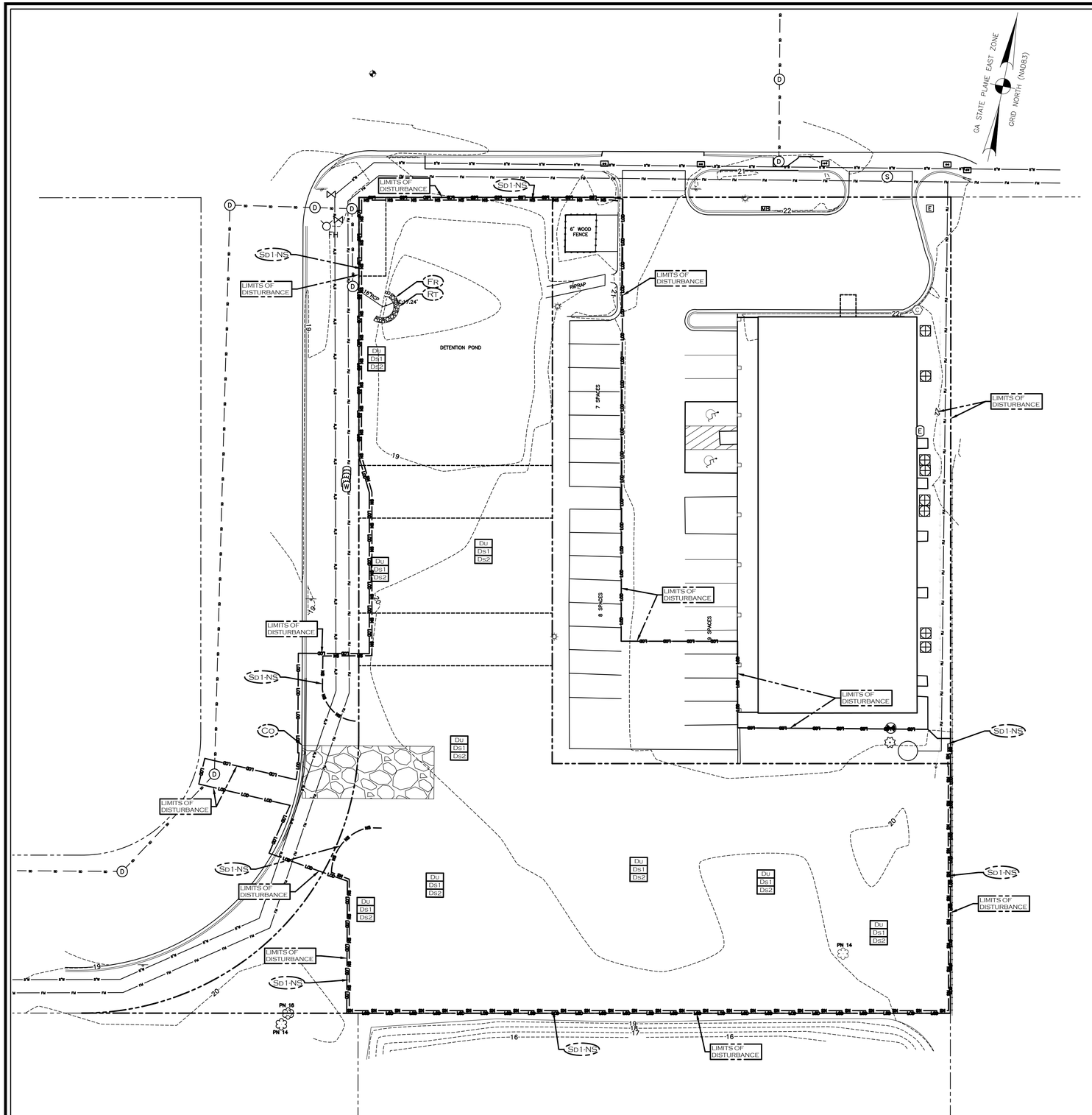
Shopping Center Development Sitework Plans
0 Old Richmond Road
Port Wentworth, GA 31407
for
Nishant Randerwala
Port Wentworth, GA

Lighting Plan and Details

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED No. 28372 PROFESSIONAL ENGINEER MARK A. BUSWELL 11-26-24

Drawing Number
C-14
14 of 28 sheets

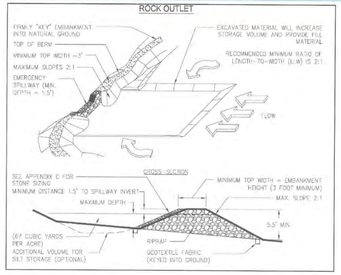


SOIL EROSION AND SEDIMENT CONTROL PLAN - PHASE I

1" = 20'

Sd4-C Detail

Sd4



Sd4-C Detail

Sd4

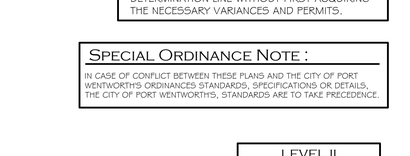


Figure 6-30.3

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.

2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

SPECIAL ORDINANCE NOTE :

IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF PORT WENTWORTH'S ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTH'S, STANDARDS ARE TO TAKE PRECEDENCE.

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN RESONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

LEVEL II CERTIFICATION NO. 2104 ISSUED 11-5-05 EXPIRES 11-15-26

SCALE: 1" = 20'

0 20' 40' 50'

REVISIONS

BOSWELL DESIGN SERVICES, INC.
OFFICE: 4700 EAST HIGHWAY 80
Unit K, Suite 1
MAILING: 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED: ---
DRAWN: MAB
CHECKED: ---
DATE: NOV. 26, 2024
JOB NO. ---
SCALE: as shown

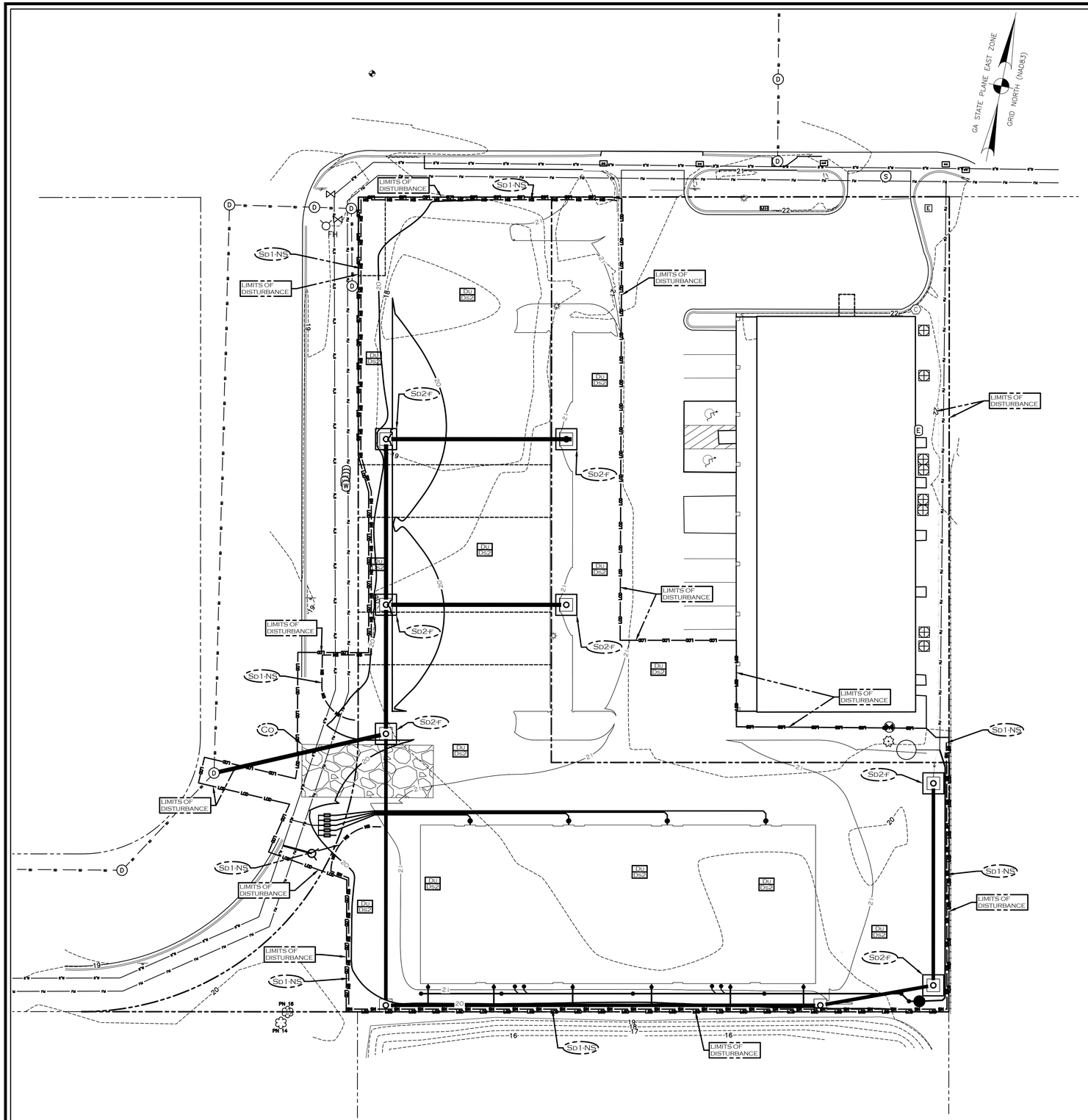
SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

SOIL EROSION AND SEDIMENT CONTROL PLAN - PHASE I

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED No. 28372 PROFESSIONAL 11-26-24 ENGINEER MARK A. BUSWELL

DRAWING NUMBER
C-15
15 OF 28 SHEETS



SOIL EROSION AND SEDIMENT CONTROL PLAN - PHASE II

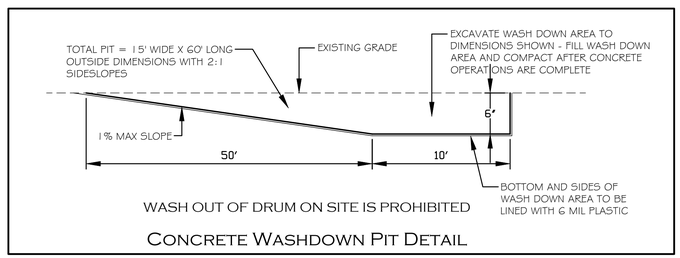
1" = 20'

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.
2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

SPECIAL ORDINANCE NOTE :

IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF PORT WENTWORTH'S ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTH'S, STANDARDS ARE TO TAKE PRECEDENCE.



WASH OUT OF DRUM ON SITE IS PROHIBITED

CONCRETE WASHDOWN PIT DETAIL

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

LEVEL II CERTIFICATION NO. 2104 ISSUED 11-5-05 EXPIRES 11-15-26

SCALE: 1" = 20'

0 20' 40' 50'

REVISIONS

BOSWELL DESIGN SERVICES, INC.
OFFICE : 4700 EAST HIGHWAY 80
UNIT K, SUITE 1
MAILING : 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED: ---
DRAWN: MAB
CHECKED: ---
DATE: NOV. 26, 2024
JOB NO. ---
SCALE: as shown

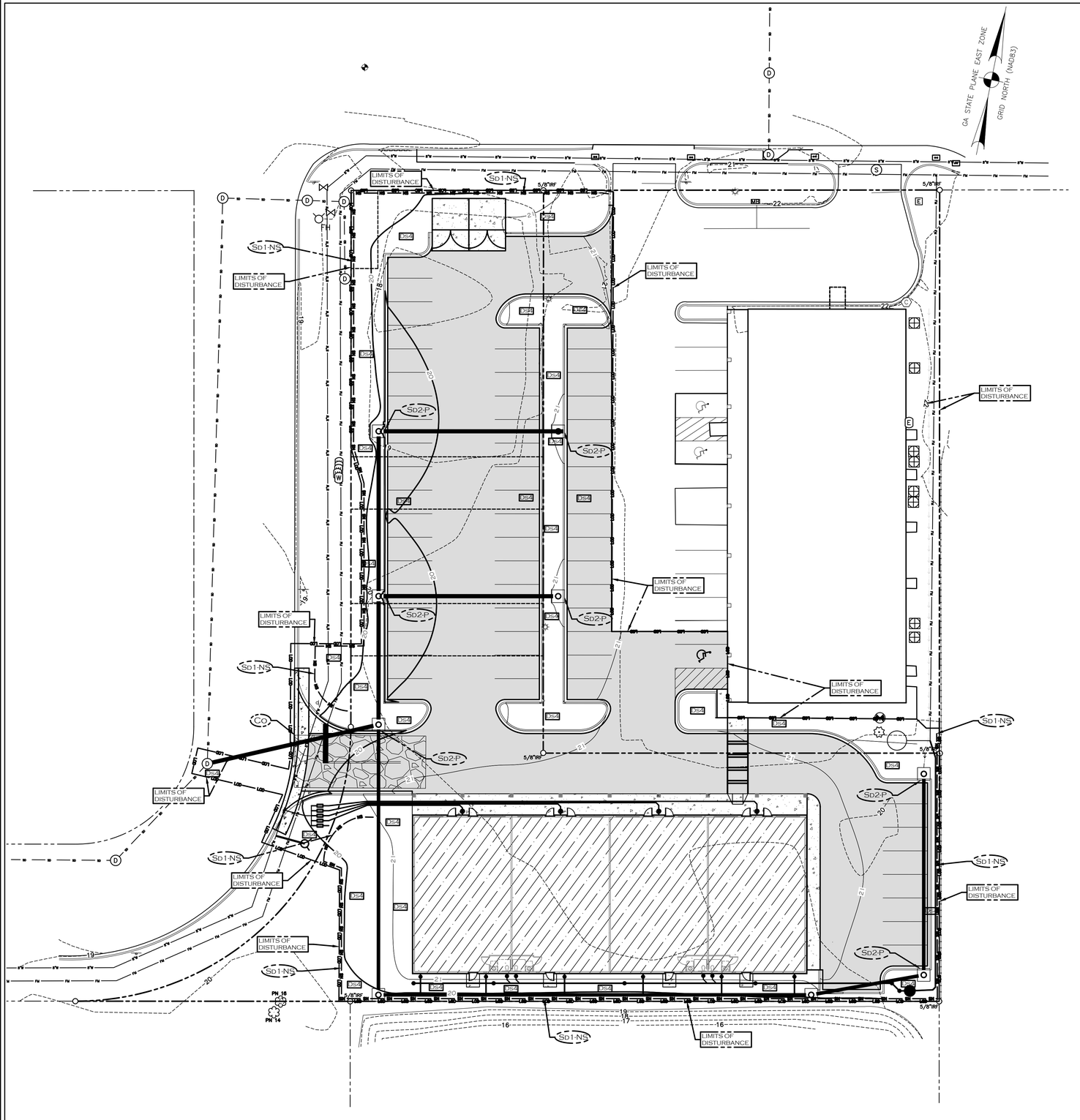
SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

SOIL EROSION AND SEDIMENT CONTROL PLAN - PHASE II

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
GEORGIA UTILITIES PROTECTION CENTER
UTILITIES PROTECTION CENTER 1-800-282-7411

GEORGIA REGISTERED No. 28372 PROFESSIONAL 11-26-24 ENGINEER MARK A. BOSWELL

DRAWING NUMBER
C-16
16 OF 28 SHEETS



SOIL EROSION AND SEDIMENT CONTROL PLAN - PHASE III

1" = 20'

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.

2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

SPECIAL ORDINANCE NOTE :

IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF PORT WENTWORTHS ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTHS, STANDARDS ARE TO TAKE PRECEDENCE.

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

LEVEL II CERTIFICATION NO. 2104 ISSUED 11-5-05 EXPIRES 11-15-26

SCALE: 1" = 20'
0 20' 40' 50'

REVISIONS

BOSWELL DESIGN SERVICES, INC.
OFFICE : 4700 EAST HIGHWAY 80
UNIT K, SUITE 103
MAILING : 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED ---
DRAWN MAB
CHECKED ---
DATE : NOV. 26, 2024
JOB NO. ---
SCALE: as shown

SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

SOIL EROSION AND SEDIMENT CONTROL PLAN - PHASE III

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED No. 28372 PROFESSIONAL ENGINEER MARK A. BOSWELL 11-26-24

DRAWING NUMBER
C-17
17 OF 28 SHEETS

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.

2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

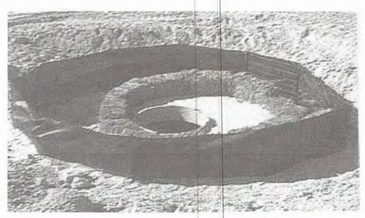
LEVEL II
CERTIFICATION
NO. 2104
ISSUED 11-5-05
EXPIRES 11-15-26

Sd2

INLET SEDIMENT TRAP

DEFINITION

A temporary sediment barrier placed around a storm drain drop inlet.



PURPOSE

Prevent sediment from entering storm drainage systems.

INSTALLATION

- Install according to approved plan, if shown.
- Do not install where vehicular traffic will be affected.
- Install at or around all storm drain drop inlets that receive runoff from disturbed areas.
- Construct on natural ground surface, excavated surface, or on machine compacted fill.

Excavated Sediment Traps

- Minimum of 1.5 feet of sediment storage in excavated sediment traps.
- Must be self-draining unless otherwise protected.

Sd2

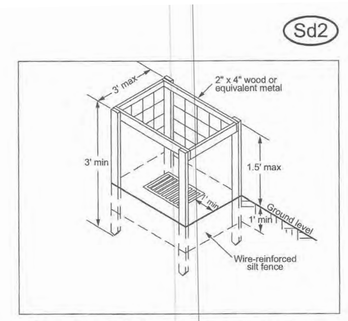
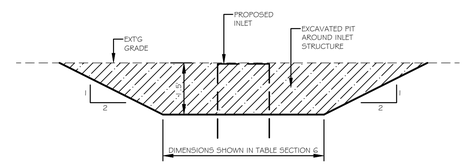


Figure 1. Fabric and supporting Frame for Inlet Protection (Sd2-F)



Sd2-F EXCAVATED SEDIMENT TRAP DETAIL
NOT TO SCALE

SPECIAL ORDINANCE NOTE :

IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF PORT WENTWORTHS ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTHS, STANDARDS ARE TO TAKE PRECEDENCE.

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

REVISIONS

BOSWELL DESIGN SERVICES, INC.
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MAILING : 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED ---
DRAWN MAB
CHECKED ---
DATE : NOV. 26, 2024
JOB NO. ---
SCALE: as shown

SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

EXCAVATED INLET SEDIMENT TRAP DETAILS

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED No. 28372 PROFESSIONAL ENGINEER
MARK A. BOSWELL
11-26-24

DRAWING NUMBER
C-18
18 OF 28 SHEETS

SOIL EROSION & SEDIMENTATION CONTROL NOTES

1. NARRATIVE: THE EXISTING SITE IS PARTIALLY DEVELOPED AND THE GROUND IS GENERALLY FLAT WITH SLOPES BETWEEN 0 AND FOUR PERCENT WITH FEW TREES. THE PROPOSED DEVELOPMENT WILL BE ONE NEW RETAIL BUILDING WITH JOINT PARKING AND WILL HAVE PAVING, GRADING, DRAINAGE AND UTILITIES. DETENTION WILL BE ACHIEVED BY UTILIZING THE EXISTING PARK POND. THE TOTAL SITE IS APPROXIMATELY 1.65 ACRES WITH THE DISTURBED AREA BEING APPROXIMATELY 0.97 ACRES.

2. DEVELOPER / OWNER : NISHANT RANDERWALA
112 RIVERSIDE BLVD.
PORT WENTWORTH, GA. 31407

PRIMARY PERMITTEE EMAIL : NMRA1234@GMAIL.COM

3. 24 HOUR CONTACT : NISHANT RANDERWALA
912-544-0217

4. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN CONFORMANCE WITH THE CURRENT STATE SOIL AND WATER CONSERVATION COMMITTEE OF GEORGIA "MANUAL FOR EROSION CONTROL IN GEORGIA.

5. PRIOR TO ANY OTHER CONSTRUCTION, STABILIZED CONSTRUCTION EXITS SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY TO OR EXIT FROM THE SITE. ALL ENTRANCES TO THE SITE WHICH ARE NOT PROTECTED SHALL BE BARRICADED.

6. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION EXITS, ALL PERIMETER EROSION CONTROL DEVICES AND STORM WATER MANAGEMENT DEVICES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION.

7. ADDITIONAL EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING ANY PHASE OF CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY !

8. THE LOCATIONS OF EROSION CONTROL DEVICES SHALL BE ADJUSTED AS CONSTRUCTION PROGRESSES IN ORDER TO MAINTAIN A FUNCTIONING EROSION CONTROL SYSTEM.

9. THE FAILURE OF ANY EROSION CONTROL DEVICE TO FUNCTION AS INTENDED, FOR ANY REASON, SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY !

10. EROSION CONTROL DEVICES SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND AT LEAST DAILY DURING PROLONGED PERIODS OF CONTINUOUS RAINFALLS.

11. EROSION CONTROL DEVICES SHALL BE CLEANED WHEN THEY BECOME HALF FILLED WITH SEDIMENT.

12. EROSION CONTROL DEVICES SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A FUNCTIONING EROSION CONTROL SYSTEM.

13. EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT COVER IS ESTABLISHED AND THEN REMOVED SO THAT DRAINAGE FROM THE SITE IS NOT IMPAIRED.

14. STORM WATER DETENTION DEVICES SHALL BE CLEANED AS SPECIFIED ABOVE AND AFTER PERMANENT GROUND COVER HAS BEEN ESTABLISHED.

15. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING.

16. ANY DISTURBED AREAS WITH SLOPES 2:1 OR FLATTER WHICH ARE NOT STABILIZED BY ANY OTHER MEASURES SHALL BE SEEDED AS SPECIFIED IN "PERMANENT SEEDING".

17. VEGETATIVE METHODS:
A VEGETATIVE COVER SHALL BE ESTABLISHED AND MAINTAINED OVER ALL FINAL GRADING AND OTHER DISTURBED AREAS OF THE SITE. SEE COASTAL PLAIN VEGETATIVE COVERS FOR AN OUTLINE OF THE ESTABLISHMENT OF VEGETATIVE COVERS.

WEEKLY INSPECTION OF THE GRASS COVER SHALL BE PERFORMED TO IDENTIFY AREAS REQUIRING RE-ESTABLISHMENT OF GRASS.

LIME RATE: 1 TO 2 TONS PER ACRE
FERTILIZER: 1500 POUNDS OF 6-12-12 PER ACRE

18. MULCH:
MULCH SHALL BE UNCHOPPED, UNROTTED, SMALL GRAIN DRY STRAW APPLIED AT A RATE OF 2 TONS PER ACRE. MULCH MATERIAL SHALL BE RELATIVELY FREE FROM ALL KINDS OF WEEDS AND SHALL BE FREE OF PROHIBITED NOXIOUS WEEDS WHICH ARE AS FOLLOWS : CANADA THISTLE, JOHNSONGRASS AND QUACKGRASS. SPREAD MULCH MECHANICALLY OR UNIFORMLY BY HAND. MULCH ANCHORING SHALL BE ACCOMPLISHED IMMEDPLACEMENTPIATELY AFTER MULCH PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY PEG AND TWINE METHOD, MULCH ANCHORING TOOL, NETTING OR LIQUID MULCH BINDERS.

19. SOIL TYPE: THE SOILS IN THIS AREA HAVE BEEN CLASSIFIED BY THE SOIL CONSERVATION SERVICE AS : Pn (Pooler Fine Sandy Loam).

20. THIS DEVELOPMENT IS WITHIN MINIMAL ZONING AREA "X" ACCORDING TO F.I.R.M. COMMUNITY PANEL NUMBER 13051C0030G, MAP REVISED 8-16-18.

21. THIS SITE IS IN FLOOD ZONE "X" AND IS NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE.

SPECIAL NOTES:

1. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTEDED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.

2. THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES SHALL BE INSTALLED PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.

3. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

4. CITY OF POOLER PERSONNEL SHALL HAVE THE RIGHT TO INSPECT STORMWATER FACILITIES AT ALL TIMES.

5. STATE WATERS DO NOT EXIST ON THIS PROPERTY.

6. FRESH WATER WETLANDS DO NOT EXIST ON THIS PROPERTY.

7. THE EROSION AND SEDIMENT CONTROL PLAN DESIGNER HAS VISITED THE SITE PRIOR TO DESIGN OF THE E & SC PLANS.

8. THE RECEIVING WATERS FOR THIS PROJECT IS THE EXISTING PORT WENTWORTH DRAINAGE SYSTEM, PARK POND, SEVERAL UN-NAMED CONVEYANCES, SAVANNAH RIVER AND ULTIMATELY THE ATLANTIC OCEAN.

9. ANY DISTURBANCE AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABALIZED WITH TEMPORARY SEEDING.

10. AMENDMENTS OR REVISIONS TO THE ES & PC PLAN WHICH HAVE A HYDRAULIC EFFECT ON THE PROJECT MUST BE APPROVED BY THE DESIGN ENGINEER.

CLEARING NOTES:

1. ALL ELEVATIONS ARE BASED ON 88 NAVD DATUM.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES AND FOR AVOIDING ALL CONFLICTS WITH SAME. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

3. ALL WORK SHALL BE IN COMPLIANCE WITH THE STATE SOIL AND WATER CONSERVATION COMMITTEE'S "MANUAL FOR EROSION AND SEDIMENTATION CONTROL IN GEORGIA. ALL SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED ON A REGULAR BASIS AND SHALL BE REMOVED BY THE CONTRACTOR UPON ACCEPTANCE OF THE SITE BY THE OWNER. SEE LAND DISTURBING PLAN.

4. ALL DISTURBED AREAS AND PROPOSED EARTH GRADING NOT TO BE COVERED BY OTHER SURFACES SHALL BE GRASSED AS DESCRIBED ON THE LAND DISTURBING ACTIVITY PLAN.

5. EGRESS FROM THE SITE WILL BE SUCH THAT ALL VEHICLES MUST TRAVERSE CONSTRUCTION EXITS TO REMOVE MUD FROM TIRES BEFORE ENTERING ANY PAVED PUBLIC HIGHWAY.

6. BALES OF HAY, STRAW OR SILT FENCE SHALL BE PLACED AROUND ALL STORM INLETS TO PREVENT SEDIMENT FROM ENTERING NEW PIPE OR DRAINAGE WAYS DURING CONSTRUCTION. THESE MEASURES ARE TEMPORARY.

7. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING POSITIVE DRAINAGE OF ALL AREAS WITHIN THE PROJECT SITE INCLUDING RIGHTS-OF-WAYS, EASEMENTS AND LOTS. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FILL AND OR GRADING TO MEET THE FINISHED PLAN GRADES AND ELIMINATE ANY AND ALL AREAS WHICH ARE LOW AND DO NOT DRAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING PROPER DRAINAGE OF ANY AREAS WHICH ARE CHANGED AS A RESULT OF FIELD ADJUSTMENTS TO THE CONSTRUCTION PLANS.

8. THE CONTRACTOR WILL NOT BEGIN CLEARING OR ANY CONSTRUCTION ACTIVITY UNTIL THE APPROPRIATE PERMITS HAVE BEEN ISSUED.

9. IF REQUIRED, TREE PROTECTION BARRICADES SHALL BE INSTALLED PRIOR TO ANY CLEARING ACTIVITY AND MAINTAINED UNTIL INSTRUCTED BY OWNER OR ENGINEER TO REMOVE THEM.

10. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO AVOID DAMAGE TO TREES AND ROOT SYSTEMS WHILE WORKING WITHIN TREE PROTECTION BARRICADES. THE CONTRACTOR SHALL NOT WORK WITHIN TREE PROTECTION BARRICADES WITHOUT A REPRESENTATIVE FROM THE OWNER OR ENGINEER PRESENT.

11. PRUNING OF TREE LIMBS, BRANCHES AND ROOTS OF TREES WHICH ARE WITHIN TREE PROTECTION BARRICADES SHALL BE DONE IN CONFORMANCE WITH SPECIFICATIONS AND RECOMMENDATIONS OF THE "NATIONAL ARBORIST ASSOCIATION" (N.A.A.) IN "PRUNING STANDARDS FOR SHADE TREES". ANY VARIATION FROM THE RECOMMENDATION OF THE N.A.A. SHALL BE APPROVED BY THE OWNER IN WRITING PRIOR TO ANY PRUNING.

12. LIMITS OF GRADING AND GRASSING ARE INDICATED ON PLANS AS "LIMITS OF DISTURBANCE".

13. ALL DISTURBED AREAS FROM NEW CONSTRUCTION ACTIVITIES WILL BE SEEDED, MULCHED, FERTILIZED AND WATERED TO PROMOTE A SUFFICIENT GROUND COVER THAT WILL PREVENT SOIL EROSION. SUFFICIENT COVERAGE SHALL BE AS SPECIFIED IN "EROSION CONTROL GRASSING".

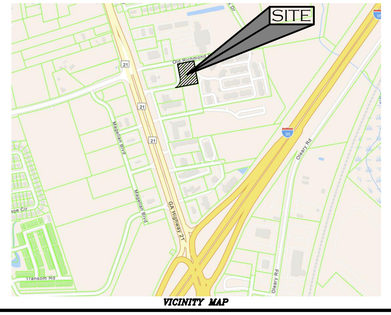
14. DRAINAGE: ALL EXCAVATION SHALL BE PERFORMED SO THAT THE SITE AND THE AREA IMMEDIATELY SURROUNDING THE SITE WHICH EFFECTS THE OPERATIONS WILL BE CONTINUALLY AND EFFECTIVELY DRAINED. SURFACE WATER, GROUNDWATER, OR ANY PERCHED WATER WHICH MIGHT BE ENCOUNTERED DURING EXCAVATIONS SHALL BE REMOVED BY ANY ACCEPTABLE MEANS APPROVED BY THE ENGINEER.

TENTATIVE ACTIVITY SCHEDULE

	2024					
	JAN	FEB	MAR	APR	MAY	JUNE
DEMOLITION, CLEARING, GRUBBING						
INSTALLATION OF SEDIMENT CONTROLS AND TREE PROTECTION BARRICADES						
TEMPORARY GRASSING						
SITE GRADING						
UTILITY INSTALLATION						
BUILDING CONSTRUCTION						
PERMANENT GRASSING						
PAVING						
MAINTENANCE OF SEDIMENT CONTROL						
REMOVAL OF SEDIMENT CONTROL						

SITE DATA

ZONE......"X"
TOTAL ACREAGE.....1.654 ACRES (LOTS 5 & 5A)
DISTURBED ACREAGE.....0.97 ACRES
S.C.S. SOIL SURVEY MAP AS PER WEB SOIL SURVEY



VICINITY MAP

Co

CRUSHED STONE CONSTRUCTION EXIT

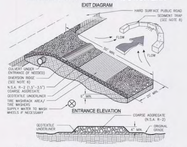


Figure 1. Crushed Stone Construction Exit Installation Requirements

Figure 2. Geotextile Underliner

MAINTENANCE

- Periodically dress with 1.5"-3.5" stone.
- Maintain in a condition that will prevent tracking or flow of mud onto public rights-of way.
- Immediately remove mud and debris tracked or spilled onto roadways.

75

Co

CONSTRUCTION EXIT

DEFINITION

A stone-stabilized pad located at any point where traffic will be leaving a construction site to a public right-of-way, street, alley, sidewalk, or parking area.

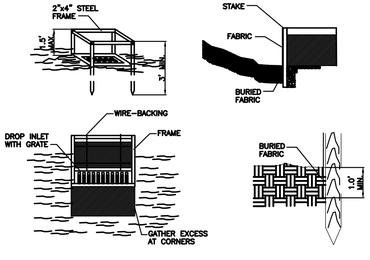
PURPOSE

- Reduce or eliminate the transport of mud from the construction area onto public right-of-ways.

INSTALLATION

- Install according to the approved plan.
- Use 1.5"-3.5" stone.
- Minimum pad thickness of 6".
- Minimum pad width of 20 ft.
- Minimum pad length of 50 ft.
- When the construction is less than 50 ft from the paved access, the length shall be from the edge of the existing pavement to the permitted building being constructed.
- When washing is required, conduct on an area stabilized with crushed stone and route runoff to an approved sediment trap or sediment basin.
- Place the geotextile liner the full length and width of the entrance.

74



1. FOR STAKES, USE 2x4 INCH WOOD (PREFERRED) OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
2. SPACE STAKES EVENLY AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART AND SECURELY DRIVE THEM INTO THE GROUND, APPROXIMATELY 18 INCHES DEEP.
3. TO PROVIDE NEEDED STABILITY TO THE INSTALLATION, FRAME WITH 2x4 INCH WOOD STRIPS AROUND THE CREST OF THE OVERFLOW AREA AT MAXIMUM OF 1.5 FEET ABOVE THE DROP INLET CREST.
4. PLACE THE BOTTOM 12 INCHES OF THE FABRIC IN TRENCH AND BACKFILL THE TRENCH WITH AT LEAST 4 INCHES OF CRUSHED STONE OR 12 INCHES OF COMPACTED SOIL.
5. FASTEN FABRIC SECURELY TO THE STAKES AND FRAME. JOINTS MUST BE OVERLAPPED TO THE NEXT STAKE.
6. THE TOP OF THE FRAME AND FABRIC MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE FROM THE DROP INLET TO KEEP RUNOFF FROM BYPASSING THE INLET. IT MAY BE NECESSARY TO BUILD A TEMPORARY DIKE ON THE DOWN SLOPE SIDE OF THE STRUCTURE TO PREVENT BYPASS FLOW.

INLET SEDIMENT TRAP DETAIL
FILTER FABRIC WITH SUPPORTING FRAME

Sd2-F

N.T.S.

STREAM BUFFER ENCROACHMENT NOTES :

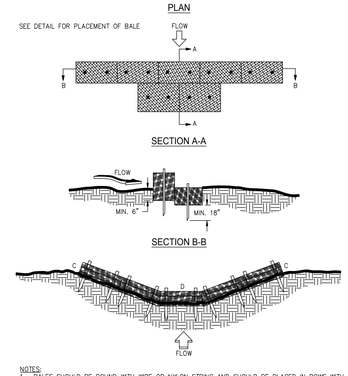
1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.

2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

WEIGHTED RUN-OFF COEFFICIENTS :

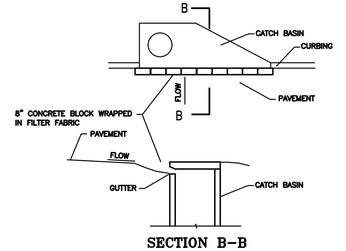
PRE-DEVELOPED = 83
POST-DEVELOPED = 92

TYPICAL STRAW BALE CHECK DAM



NOTES:
1. BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.
3. POINT C OF SECTION B-B SHOULD ALWAYS BE HIGHER THAN POINT D.

Cd-HB



SECTION B-B

NOTE: INSTALL FILTER AFTER ANY ASPHALT PAVMENT INSTALLATION

INLET SEDIMENT TRAP DETAIL
CURB INLET FILTER ("PIGS IN BLANKET")

Sd2-P

SPECIAL ORDINANCE NOTE :

IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF PORT WENTWORTH'S ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTH'S STANDARDS ARE TO TAKE PRECEDENCE.

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NOTES AND DETAILS

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
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811
UTILITIES PROTECTION CENTER
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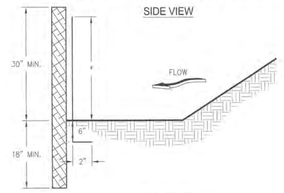
GEORGIA REGISTERED
Mark Boswell
No. 28372
PROFESSIONAL
11-26-24
ENGINEER
MARK A. BOSWELL

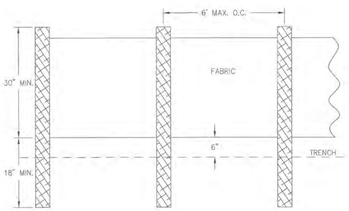
DRAWING NUMBER
C-19
19 OF 28 SHEETS

SILT FENCE - TYPE NON-SENSITIVE

SIDE VIEW



FRONT VIEW



NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Figure 6-27.1

PERFORMANCE EVALUATION

For a product or practice to be approved as a sediment barrier, that product or practice must have a documented P-factor no greater than 0.045 for non-sensitive areas or a P-factor no greater than 0.030 for sensitive areas, as specified by GSWCC. For complete test procedures and approved products list please visit www.gaswcc.georgia.gov.

Table 6-27.1 Criteria for Sediment Barrier

Land Slope	Maximum Slope Length Above Fence
Percent	Feet
< 2	100
2 to 5	75
5 to 10	50
10 to 20	25
>20*	15

*In areas where the slope is greater than 20%, a flat area length of 10 feet between the toe of slope to the barrier should be provided.

Table 6-27.2 Post Size

Type	Min Length	Type of Post	Size of Post
NS	4'	Soft wood Oak Steel	3"dia or 2x4 1.5" x1.5" 1.3lb./ft. min
S	4'	Steel Oak	1.3lb./ft. min 2"x2"

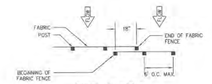
Table 6-27.3 Fasteners for Wood Posts

	Guage	Crown	Legs	Staples / Post
Wire Staples	17 min.	3/4" wide	1/2" long	5 min.
	Guage	Length	Button Heads	Nail/ Post
Nails	14 min.	1"	3/4"	4 min.

Note: Filter Fabric may also be attached to the post by wire, chors, and pockets or any other method provided minimum P-factor, as required by GSWCC, is met.

FASTENERS FOR SILT FENCES

OVERLAP AT FABRIC ENDS



NOTES:
1. THE FABRIC AND WIRE SHOULD BE SECURELY FASTENED TO POSTS AND FABRIC ENDS MUST BE OVERLAPPED A MINIMUM OF 18" OR WRAPPED TOGETHER AROUND A POST TO PROVIDE A CONTINUOUS FABRIC BARRIER AROUND THE PILE.

Figure 6-27.5

SD1-NS DETAIL

BMP REMOVAL NOTE :

1. RETROFITS, PERIMETER SILT FENCE AND CONSTRUCTION EXIT TO BE LEFT IN PLACE UNTIL FINAL STABILIZATION HAS OCCURED.

2. ONCE THE SITE IS PAVED THE CONSTRUCTION EXIT IS NO LONGER NEEDED.

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.

2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

Erosion and Sediment Control Phasing

Initial Phase (Phase I)

1. This phase shall include Silt fencing and construction exits and sediment and detention ponds to be installed prior to any land disturbing activities to prevent sediment from leaving the site.

Intermediate Phase (Phase II)

1. This phase shall include construction of any outlet structures, retrofits, check dams, inlets protection and temporary grassing.

Final Phase (Phase III)

1. This phase shall include outfall protection, any revised inlet protection and any other permanent devices.

~~PHASE I~~
~~REQUIRED TEMPORARY SEDIMENT STORAGE~~

~~SEDIMENT STORAGE WILL BE ACHIEVED IN BOTTOM OF TEMPORARY POND~~

~~REQUIRED SEDIMENT STORAGE TEMPORARY BASIN 1 :~~

~~67 C.Y. / ACRE x 1.75 ACRES DISTURBED = 117.3 C.Y. REQUIRED~~

~~SILT STORAGE:~~

~~TEMPORARY BASIN = 125 CY~~
~~125 CY (supplied) > 117.3 CY (required)~~

~~PHASE II AND PHASE III~~
~~REQUIRED SEDIMENT STORAGE CALCULATIONS~~

~~SEDIMENT STORAGE WILL BE ACHIEVED WITHIN SEDIMENT TRAPS - SEE C-17 FOR DETAILS~~

~~REQUIRED SEDIMENT STORAGE:~~

~~67 C.Y. / ACRE x 1.75 ACRES DISTURBED = 117.3 C.Y. REQUIRED~~

~~SILT STORAGE~~

~~WITHIN TRAPS = 3,180 CF = 117.8 CY (SEE C-19 FOR DETAILS)~~
~~TOTAL SEDIMENT STORAGE = 117.8 CY~~
~~117.8 CY (supplied) > 117.3 CY (required)~~

STORM AND UTILITIES MANHOLE AND BOX NOTES :

1. INVERT ELEVATIONS ARE TO BE CONSIDERED AS PIPE INVERTS AND NOT AS THE INVERT OF THE MANHOLE, BOX, ETC.

DESCRIPTION OF STORM WATER POLLUTION DISCHARGE PREVENTION PRACTICES

1. THE FOLLOWING IS A DESCRIPTION OF THE PRACTICES TO BE USED BUT NOT LIMITED TO :
   A. CONSTRUCTION EXIT
   B. SILT FENCING
   C. TEMPORY SEDIMENT BASINS
   D. HAY BALE CHECK DAMS
   E. STONE CHECK DAMS
   F. STORM OUTLET PROTECTION
   G. GRASSING
   ~~H. DETENTION POND~~
   ~~I. SKIMMER~~
   J. DUST CONTROL
   K. CONCRETE WASHDOWN PIT

SPECIAL ORDINANCE NOTE :

IN CASE OF CONFLICT BETWEEN THESE PLANS AND THE CITY OF PORT WENTWORTH'S ORDINANCES STANDARDS, SPECIFICATIONS OR DETAILS, THE CITY OF PORT WENTWORTH'S, STANDARDS ARE TO TAKE PRECEDENCE.

GEORGIA
UNIFORM CODING SYSTEM
FOR SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES
GEORGIA SOIL AND WATER CONSERVATION COMMISSION

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Ce	CONSTRUCTION EXIT			A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Dl	DIVERSION			An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE			A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A storm flow outlet device constructed at zero grade across the slope whereby concentrated runoff may be discharged as a non-erosive velocity onto undisturbed areas stabilized by existing vegetation.
Rd	ROCK FILTER DAM			A temporary stone filter dam installed across drainageways or in conjunction with a temporary sediment trap.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RISER FITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, or a silt fence.
Sd2	INLET SEDIMENT TRAP			A temporary protective device formed at or around an inlet to a storm drain to trap sediment.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER			A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
SpB	SWEPT BERM			A linear control device constructed as a diversion perpendicular to the direction of the runoff to enhance dissipation and infiltration of runoff, while creating multiple sedimentation chambers with the employment of intermediate dikes.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING			A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING			A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN			A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Tp	TOPSOILING			The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION			To protect desirable trees from injury during construction activity.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)		Cs	Planting vegetation on dunes that are denuded, artificially constructed, or re-nourished.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		Ds1	Establishing temporary protection for disturbed areas where seedings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP. SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)		Ds3	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SODDING)		Ds4	A permanent vegetative cover using sods on highly erodible or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fl-Cd	FLOCCULANTS AND COAGULANTS		Fl-Cd	Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (VEGETATIVE STABILIZATION)		Sb	The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION		Ss	A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKIFIERS AND BINDERS		Tac	Substance used to anchor straw or hay mulch by causing the organic material to bind together.

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SPECIAL SOIL EROSION PREVENTION NOTES :

1. The state of Georgia requires that the initial soil erosion prevention measures shall be inspected by the designer within 7 days after installation.

2. It is the responsibility of the contractor to notify the soil erosion prevention plan designer within 7 days after the initial soil erosion measures are in place for inspection.

3. Soil erosion prevention plans shall be kept current and on site or readily accessible at all times during the duration of the project until after final stabilization has occurred.

~~4. Primary permittee must provide a copy of the soil erosion prevention plans to each secondary permittee.~~

5. Contractor is to keep a record of his inspections of the soil erosion control measures to include at least the following:
   a. date and scope of the inspection
   b. name of person performing inspection
   c. major observations (including noncompliance incidents)
Inspection reports are to be kept current and on site or readily accessible at all times during the duration of the project until after final stabilization has occurred.

6. Sampling of the outfall is the responsibility of the primary permittee and sampling requirements are to be as per the NPDES general permit.

7. Silt fencing is to remain in place until final stabilization.

8. Waste materials shall not be discharged to state waters except as authorized by a section 404 permit.

9. These ES & PC plans are in compliance with waste disposal, sanitary sewer and septic tank regulations.

10. Great care shall be taken to prevent oil spills and leaks. In the event that a spill shall occur, stop the spill source immediately and implement BMP's and clean-up for the spill.

LEVEL II CERTIFICATION NO. 2104
ISSUED 11-5-05
EXPIRES 11-15-26

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

REVISIONS

BOSWELL DESIGN SERVICES, INC.
OFFICE - 4700 EAST HIGHWAY 80
Unit K, Suite 1
MAILING - 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED ---
DRAWN MAB
CHECKED ---
DATE: NOV. 26, 2024
JOB NO. ---
SCALE: as shown

SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

NOTES AND DETAILS

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
GEORGIA UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED
Mark Boswell
No. 28372
PROFESSIONAL
11-26-24
ENGINEER
MARK A. BOSWELL

DRAWING NUMBER
C-20
20 OF 28 SHEETS

7 DAY INSPECTION NOTE :

The design professional is to inspect the installation of the initial sediment storage requirements and perimeter control BMP's. The design professional must be retained by the primary permittee to conduct a site inspection within seven (7) days after the the installation of the initial sediment storage requirements and perimeter control BMP's. The design professional must report the results of the inspection to the primary permittee within seven (7) days and the primary must correct all deficiencies identified in the report within two (2) business days after receiving the report (unless additional time is needed due to adverse weather). The primary permittee may use an alternate design professional to conduct the BMP inspection, provided that they make a written request to EPD to change from the design professional who developed the plan and EPD has agreed.

DESIGN PROFESSIONAL 7 DAY VISIT CERTIFICATION

Date of Inspection :

I certify the site was in compliance with the ES&PC Plan on the date of inspection.

Mark Boswell 2104

GSWC LEVEL II DESIGN PROFESSIONAL CERTIFICATION #

Inspection revealed the following discrepancies from the ES&PC Plan.

These deficiencies must be addressed immediately and a re-inspection scheduled. Work shall not proceed on the site until design Professional Certification is obtained.

PRODUCT SPECIFIC PRACTICES

1. Petroleum Based Products – Containers for products such as fuels, lubricants and tars will be inspected daily for leaks and spills. This includes on-site vehicle and machinery daily inspections and regular preventative maintenance of such equipment. Equipment maintenance areas will be located away from state water, natural drains and storm water drainage inlets. In addition, temporary fueling tanks shall have a secondary containment liner to prevent/minimize site contamination. Discharge of oils, fuels, and lubricants is prohibited. Proper disposal methods will include collection in a suitable container and disposal as required by local and State regulations.

2. Paints / Finishes / Solvents – All products will be stored in tightly sealed original containers when not in use. Excess product will not be discharged to the storm water collection system. Excess product, materials used with these products and product containers will be disposed of according to manufacturer's specifications and recommendations.

3. Concrete Truck Washing

a. Coordinate with site superintendent to excavate a pit deep enough to contain the wash down water.

b. Back equipment into pit.

c. Wash down only the chute hopper and rear of the vehicle. DO NOT WASH OUT DRUM.

d. Make sure wash down water goes into and stays in the pit.

e. Coordinate with site superintendent to fill in pit and smooth out ground.

f. Never allow wash down to enter a storm system.

4. Fertilizer / Herbicides – These products will be applied at rates that do not exceed the manufactuer's specifications or above the guidelines set forth in the crop establishment or in the GSWCC Manual for Erosion and Sediment Control in Georgia. Any storage of these materials will be under roof in sealed containers.

5. Building Materials – No building materials will be buried or disposed on-site. All such materials will be disposed of in proper waste disposal procedures.

Soil Cleanup and Control Practices

1. Local, State and manufacturer's recommended methods for spill cleanup will be clearly posted and procedures will be made available to site personnel.

2. Material and equipment necessary for spill cleanup will be kept in the material storage areas. Typical materials and equipment includes, but is not limited to, brooms, dustpans, mops, rags, gloves, goggles, cat litter, sand, saw dust and properly labeled plastic and metal waste containers.

3. Spill prevention practices and procedures will be reveiwed after a spill and adjusted as necessary to prevent future spills.

4. All spills will be cleaned up immediately upon discovery. All spills will be reported as required by local, State and Federal regulations.

5. FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER). THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.

6. FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.

7. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.

8. FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

9. The contractor shall notify the licensed professional who prepared this plan if more than 1,320 gallons of petroleum is stored onsite (this includes capacities of equipment) or if any one piece of equipment has a capacity greater than 660 gallons. The Contactor will need a Spill Prevention Containment and Countermeasures Plan prepared by that licenseed professional.

SANITARY WASTES :

1. A minimum of one portable sanitary unit will be provided for every ten (10) workers on the site. All sanitary waste will be collected from the portable units a minimum of one time per week by a licensed portable facility provider in complete compliance with local and state regulations.

2. All sanitary waste units will be located in an area where the likelihood of the unit contributing to storm water discharge in negligible. Additional containment BMP's must be implemented, such as gravel bags or specially designed plastic skid containers around the base, to prevent wastes from contributing to storm water dischoges. The location of sanitary waste units must be identified on the Erosion Control Plan Grading Phase Sheet by the contractor once the locations have been determined.

3. Sanitary Sewer will be provided by Municipal Authority/Septic System at the completion of this project.

HAZARDOUS WASTES :

1. All hazardous waste materials will be disposed of in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. The jobsite superintendent, who will also be responsible for seeing that these practices are followed, will instruct site personnel in these practices. Material Softey Data Sheets (MSDS's) for each substance with hazradous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such product is stored and/or used and another copy of the MSDS will be maintained in the ESPCP file at the jobsite construction trailer office. Each employee who must handle a substance with hazrdous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

2. The contractor will implement the Spill Prevention Control and Countermeasures (SPCC) Plan found within this ESPCP and will train all personnel in the proper cleanup and handling of spilled materials. No spilled , hazardous materials or hazardous wastes will be allowed to come in contact with storm water discharges. If such contact occurs, the storm water discharge will be continued on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated storm water. It shall be the responsibility of the job site superintendent to properly train all personnel in the use of the SPCC plan.

APPENDIX B

Nephelometric Turbidity Unit (NTU) Tables

Cold Water (Trout Stream)

Surface Water Drainage Area, square miles

SITE SIZE ACRES	0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
1.00-10	25	50	75	150	300	500	500	500
10.01-25	25	25	50	75	150	200	500	500
25.01-50	25	25	25	50	75	100	300	500
50.01-100	20	25	25	35	50	75	150	300
100.01+	20	20	25	25	25	50	60	100

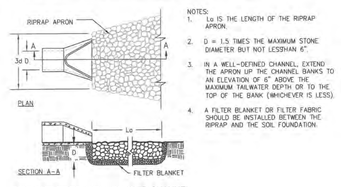
Warm Water (Supporting Warm Water Fisheries)

Surface Water Drainage Area, square miles

SITE SIZE ACRES	0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
1.00-10	75	150	200	400	750	750	750	750
10.01-25	50	100	100	200	300	500	750	750
25.01-50	50	50	100	100	200	300	750	750
50.01-100	50	50	50	100	100	150	300	600
100.01+	50	50	50	50	50	100	200	100

RIPRAP OUTLET PROTECTION

PIPE OUTLET TO FLAT AREA – NO WELL DEFINED CHANNEL



NOTES:
1. Lo IS THE LENGTH OF THE RIPRAP APRON.
2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESSTHAN 6".
3. IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK (WHICHEVER IS LESS).
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND THE SOIL FOUNDATION.

PIPE OUTLET TO WELL DEFINED CHANNEL

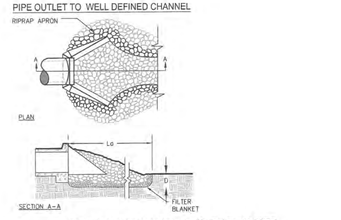


Figure 6-34.3 - Riprap Outlet Protection (Modified From Va SWCC)

GSWCC 2016 Edition 6-212

RIP-RAP OUTLET PROTECTION St

N.T.S.

DESCRIPTION OF STORM WATER POLLUTION DISCHARGE PREVENTION PRACTICES

1. THE FOLLOWING IS A DESCRIPTION OF THE PRACTICES TO BE USED BUT NOT LIMITED TO :
   - A. CONSTRUCTION EXIT
   - B. SILT FENCING
   - C. TEMPORY SEDIMENT BASINS
   - D. HAY BALE CHECK DAMS
   - E. STONE CHECK DAMS
   - F. STORM OUTLET PROTECTION
   - G. GRASSING
   - ~~H. DETENTION POND~~
   - ~~I. SKIMMER~~
   - J. DUST CONTROL
   - K. CONCRETE WASHDOWN PIT

EROSION, SEDIMENT AND POLUTION CONTROL NOTES :

4. Inspections.

a. Permittee requirements.

(1). Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment and (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted.

(2). Measure and record rainfall within disturbed areas of the site that have not met final stabilization once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday. The data collected for the purpose of compliance with this permit shall be representative of the monitored activity. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region.

(3). Certified personnel (provided by the primary permittee) shall inspect the following at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the primary permittee's construction site; (b) areas used by the primary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, the permittee must comply with Part IV.D.4.a.(4). These inspections must be conducted until a Notice of Termination is submitted.

(4). Certified personnel (provided by the primary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination has been submitted) the areas of the site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s).

(5). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection.

(6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.a.(5). of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site or that portion of a construction site that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the inspection report shall contain a certification that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit.

5. Maintenance. The Plan shall include a description of procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and other protective measures identified in the site plan.

6. Sampling Requirements. This permit requires the monitoring of nephelometric turbidity in receiving water(s) or outfalls in accordance with this permit. This paragraph shall not apply to any land disturbance associated with the construction of single-family homes which are not part of a subdivision or planned common development unless five (5) acres or more will be disturbed. The following procedures constitute EPD's guidelines for sampling turbidity.

a. *Sampling Requirements* shall include the following:

(1). A USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the location of the site or the stand alone construction; (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during mandatory field verification, into which the stormwater is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the stormwater(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map;

(2). A written narrative of site specific analytical methods used to collect, handle and analyze the samples including quality control/quality assurance procedures. This narrative must include precise sampling methodology for each sampling location;

(3). When the permittee has determined that some or all outfalls will be sampled, a rationale must be included on the Plan for the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries); and

(4). Any additional information EPD determines necessary to be part of the Plan. EPD will provide written notice to the permittee of the information necessary and the time line for submittal.

b. *Sample Type.* All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved); the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.

(1). Sample containers should be labeled prior to collecting the samples.

(2). Samples should be well mixed before transferring to a secondary container.

(3). Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.

(4). Manual, automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. If automatic sampling is utilized and the automatic sampler is not activated during the qualifying event, the permittee must utilize manual sampling or rising stage sampling during the next qualifying event. Dilution of samples is not required. Samples may be analyzed directly with a properly calibrated turbidimeter. Samples are not required to be cooled.

(5). Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in this permit must be reported to EPD as specified in Part IV.E.

c. *Sampling Points.*

(1). For construction activities the primary permittee must sample all receiving water(s), or all outfall(s), or a combination of receiving water(s) and outfall(s). Samples taken for the purpose of compliance with this permit shall be representative of the monitored activity and representative of the water quality of the receiving water(s) and/or the stormwater outfalls using the following minimum guidelines:

(a). The upstream sample for each receiving water(s) must be taken immediately upstream of the confluence of the first stormwater discharge from the permitted activity (i.e., the discharge farthest upstream at the site) but downstream of any other stormwater discharges not associated with the permitted activity. Where appropriate, several upstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the upstream turbidity value.

Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit.

5. Maintenance. The Plan shall include a description of procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and other protective measures identified in the site plan.

6. Sampling Requirements. This permit requires the monitoring of nephelometric turbidity in receiving water(s) or outfalls in accordance with this permit. This paragraph shall not apply to any land disturbance associated with the construction of single-family homes which are not part of a subdivision or planned common development unless five (5) acres or more will be disturbed. The following procedures constitute EPD's guidelines for sampling turbidity.

a. *Sampling Requirements* shall include the following:

(1). A USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the location of the site or the stand alone construction; (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during mandatory field verification, into which the stormwater is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the stormwater(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map;

(2). A written narrative of site specific analytical methods used to collect, handle and analyze the samples including quality control/quality assurance procedures. This narrative must include precise sampling methodology for each sampling location;

(3). When the permittee has determined that some or all outfalls will be sampled, a rationale must be included on the Plan for the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries); and

(4). Any additional information EPD determines necessary to be part of the Plan. EPD will provide written notice to the permittee of the information necessary and the time line for submittal.

(2). However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the stormwater discharge.

(3). Sampling by the permittee shall occur for the following qualifying events:

(a). For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the sampling location;

(b). In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the sampling location, whichever comes first;

(c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained;

(d). Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the permittee, in accordance with Part IV.D.4.a.(6), must include a written justification in the inspection report of why sampling was not performed. Providing this justification does not relieve the permittee of any subsequent sampling obligations under (a), (b) or (c) above; and

(e). Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.

*Note that the permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week.

7. Non-stormwater discharges. Except for flows from fire fighting activities, sources of non-stormwater listed in Part III.A.2. of this permit that are combined with stormwater discharges associated with construction activity must be identified in the Plan. The Plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge.

E. Reporting.

1. The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any stormwater discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. The sampling reports must be signed in accordance with Part V.G.2. Sampling reports must be submitted to EPD using the electronic submittal service provided by EPD. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.

2. All sampling reports shall include the following information:

a. The rainfall amount, date, exact place and time of sampling or measurements;
b. The name(s) of the certified personnel who performed the sampling and measurements;
c. The date(s) analyses were performed;
d. The time(s) analyses were initiated;
e. The name(s) of the certified personnel who performed the analyses;
f. References and written procedures, when available, for the analytical techniques or methods used;
g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU;" and
i. Certification statement that sampling was conducted as per the Plan.

3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI.

GAR100001 PART IV.F (RETENTION OF RECORDS)

State of Georgia
Department of Natural Resources
Environmental Protection Division

Page 26 of 33
Permit No. GAR100001

F. Retention of Records.

1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:

a. A copy of all Notices of Intent submitted to EPD;
b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
d. A copy of all monitoring information, results, and reports required by this permit;
e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;
f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and
g. Daily rainfall information collected in accordance with Part IV.D.4.a.(1)(c) of this permit.

2. Copies of all Notices of Intent, Notices of Termination, reports, plans, monitoring reports, monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, Erosion, Sedimentation and Pollution Control Plans, records of all data used to complete the Notice of Intent to be covered by this permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the NOT is submitted in accordance with Part VI of this permit. These records must be maintained at the permittee's primary place of business or at a designated alternative location once the construction activity has ceased at the permitted site. This period may be extended by request of the EPD at any time upon written notification to the permittee.

WASTE MATERIALS :

1. All waste materials will be collected and stored in a securely lidded, metal dumpster. The dumpster will meet all solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied a minimum of once per week or more often if necessary and trash will be hauled as required by local regulations. No construction waste will be buried on-site.

2. All personnel will be instructed on proper procedures for waste disposal. A notice stating these practices will be posted at the jobsite and the Contractor will be responsible for seeing that these procedures are followed.

3. WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.

2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

LEVEL II CERTIFICATION NO. 2104 ISSUED 11-5-05 EXPIRES 11-15-26

REVISIONS

BOSWELL DESIGN SERVICES, INC.
OFFICE - 4700 EAST HIGHWAY 80
Unit X, Suite 4
MAILING - 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED ---
DRAWN MAB
CHECKED ---
DATE: NOV. 26, 2024
JOB NO. ---
SCALE: as shown

SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

NOTES AND DETAILS

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
GEORGIA UTILITIES PROTECTION CENTER, INC. GEORGIA 811
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED Mark Boswell No. 28372 PROFESSIONAL 11-26-24 ENGINEER MARK A. BOSWELL

DRAWING NUMBER
C-21
21 OF 28 SHEETS

Dust Control on Disturbed Areas — Du

DEFINITION
Controlling surface and air movement of dust on construction sites, roads, and demolition sites.

PURPOSE
- To prevent surface and air movement of dust from exposed soil surfaces.
- To reduce the presence of airborne substances that may be harmful or injurious to human health, welfare, or safety, or to animals or plant life.

CONDITIONS
This practice is applicable to areas subject to surface and air movement of dust where on and off-site damage may occur without treatment.

METHOD AND MATERIALS

A. Temporary Methods

Mulches. See standard **Ds1 - Disturbed Area Stabilization (With Mulching Only)**. Synthetic resins may be used instead of asphalt to bind mulch material. Refer to specification **Tac - Tackifiers**. Resins should be used according to manufacturer's recommendations.

Vegetative Cover. See specification **Ds2 - Disturbed Area Stabilization (With Temporary Seeding)**.

Spray-on Adhesives. These are used on mineral soils (not effective on muck soils). Keep traffic off these areas. Refer to specification **Tac - Tackifiers**.

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency measure that should be used before wind erosion starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.

Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet. Repeat as needed.

Barriers. Solid board fences, snowfences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 15 times their height are effective in controlling wind erosion.

Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.

B. Permanent Methods

Permanent Vegetation. See specification **Ds3 -Disturbed Area Stabilization (With Permanent Vegetation)**. Existing trees and large shrubs may afford valuable protection if left in place.

Topsoiling. This entails covering the surface with less erosive soil material. See specification **Tp - Topsoiling**.

Stone. Cover surface with crushed stone or coarse gravel. See specification **Cr-Construction Road Stabilization**.

Check Dam — Cd

DEFINITION
A temporary grade control structure, or dam constructed across a swale, drainage ditch, or area of concentrated flow.

PURPOSE
To minimize the erosion rate by reducing the velocity of the storm water in areas of concentrated flow.

CONDITIONS
This practice is applicable for use in small open channels and is not to be used in a live stream. Specific applications include:

1. Temporary or permanent swales or ditches in need of protection during establishment of grass linings.
2. Temporary or permanent swales or ditches that, due to their short length of service or other reasons, cannot receive a permanent non-erodible lining for an extended period of time.
3. Other locations where small localized erosion and resulting sedimentation prob lems exist.

DESIGN CRITERIA
Check dams should be designed using 2.0 cfs. For any flows exceeding 2.0 cfs, check dams may be used in conjunction with other BMPs in the channel. Dam height should be 24 inches maximum measured to the center of the check dam.

Drainage Area
For stone check dams, the drainage area shall not exceed two acres. For straw-bale check dams and compost filter socks, the drainage area shall not exceed one acre.

Side Slopes
Side slopes shall be 2:1 or flatter.

Spacing
Two or more check dams in a series shall be used for drainage areas greater than one (1) acre. Maximum spacing between dams should be such that the toe of the upstream dam is at the same elevation as the top of the downstream dam. (See Figure 6-12.1)

Geotextiles
A geotextile should be used as a separator between the graded stone and the soil base and abutments. The geotextile will prevent the migration of soil particles from the subgrade into the graded stone. The geotextile shall be selected/ specified in accordance with AASHTO M288-06 Section 7.3, *Separation Requirements*, Table 3. Geotextiles shall be "set" into the subgrade soils. The geotextile shall be placed immediately adjacent to the subgrade without any voids and extend five feet beyond the downstream toe of the dam to prevent scour.

CONSTRUCTION SPECIFICATIONS

Stone Check Dams — Cd-S

Stone check dams should be constructed of graded size 2-10 inch stone. Mechanical or hand placement shall be required to insure compete coverage of the entire width of the ditch or swale and that the center of the dam is lower than the edges. **The center of the check dam must be at least 9 inches lower than the outer edges.** (See Figure 6-12.2)

Straw-bale Check Dams — Cd-Hb

Staked and embedded straw-bales may be used as temporary check dams in concentrated flow areas while vegetation is becoming established. They shall not be used where the drainage area exceeds one acre. Straw-bales should be installed per Figure 6-12.3.

Installation
Bales should be bound with wire or nylon string. Twine bound bales are less durable. The bales should be placed in rows with bale ends tightly abutting the adjacent bales.

Downstream Row (Refer to Figure 6-12.3)
Dig a trench across the small channel, wide enough and deep enough so that the top of the row of bales placed on their long, wide side is level with the ground. The tops of bales across the center of the channel should all be level and set at the same elevation. Place the bales in position and stake them according to the instructions below.

Upstream Row
Dig another trench across the small channel, upstream and immediately adjacent to the first row of bales. The trench should be wide enough to accommodate a row of bales set vertically on their long edge. The trench should be deep enough so that at least 6 inches of each bale is below ground starting with the bale in the channel bottom. The trench should be as level as possible so that the tops of the bales across the center of the channel are level and water can flow evenly across them. Continue this trench up the side slopes of the small channel to a point where the unburied bottom line of the highest bale (Point "C", Figure 6-12.3) is higher than the top of the bales that are in the center of the channel (Point "D", Figure 6-12.3).

Anchorage
Drive standard 2 x 2 stakes or #4 rebar through the bales and into the ground 1 1/2 to 2 feet for anchorage. The first stake in each bale should be driven toward a previously laid bale to force the bales together (See Figure 6-12.3).

Reference: Colorado NRCS Straw Bale Check Dam

Compost Filter Sock — Cd-Fs

The filter sock should be staked in the center. If the compost fi lter sock is to be left as a permanent filter or part of the natural landscape, it may be seeded at time of installation for establishment of permanent vegetation.

Compost filter media used for compost filter sock filler material shall be weed free and derived from a well-decomposed source of organic matter.

The compost shall be produced using an aerobic composting process meeting CFR 503 regulations including time and temperature data.

The compost shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products will not be accepted.

Test methods for the items below should follow US Composting Council Test Methods for the Examination of Composting and Compost guidelines for laboratory procedures:

A. pH – 5.0-8.0 in accordance with TMECC 04.11-A, "Electrometric pH Determinations for Compost".

B. Particle size – 99% passing a 2-inch (50 mm) sieve and a maximum of 40% passing a 3/8-inch (~ 9.5 mm) sieve, in accordance with TMECC 02.02-B, "Sample Sieving for Aggregate Size Classification". (Note - In the field, product commonly is between ½ and 2 inches (12.5 and 50 mm) particle size).

C. Moisture content of less than 60% in accordance with standardized test methods for moisture determination.

D. Material shall be relatively free (<1% by dry weight) of inert or foreign manmade materials.

E. Sock containment system for compost filter media shall be a photodegradable or biodegradable knitted mesh material and should have 1/8 to 3/8 inch (3.2 to 9.5 mm) openings.

MAINTENANCE
Periodic inspection and required maintenance must be provided. Sediment shall be removed when it reaches a depth of one-half the original dam height or before. If the area is to be mowed, check dams shall be removed once final stabilization has occurred. Otherwise check dams may remain in place permanently. After removal, the area beneath the dam shall be seeded and mulched immediately.

(b). The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last stormwater discharge from the permitted activity (i.e., the discharge farthest downstream at the site) but upstream of any other stormwater discharge not associated with the permitted activity. Where appropriate, several downstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the downstream turbidity value.

(c). Ideally the samples should be taken from the horizontal and vertical center of the receiving water(s) or the stormwater outfall channel(s).

(d). Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall stormwater channel.

(e). The sampling container should be held so that the opening faces upstream.

(f). The samples should be kept free from floating debris.

(g). Permittees do not have to sample sheet flow that flows onto undisturbed natural areas or areas stabilized by the project. For purposes of this section, stabilized shall mean, for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures as defined in the Manual (excluding a crop of annual vegetation and a seeding of target crop perennials appropriate for the region).

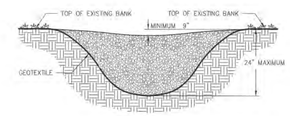
(b). All sampling pursuant to this permit must be done in such a way (including generally accepted sampling methods, locations, timing, and frequency) as to accurately reflect whether stormwater runoff from the construction site is in compliance with the standard set forth in Parts III.D.3. or III.D.4., whichever is applicable.

d. *Sampling Frequency.*

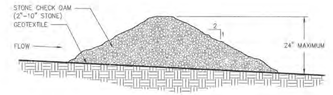
(1). The primary permittee must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any stormwater discharge to a monitored receiving water and/or from a monitored outfall location within in forty-five (45) minutes or as soon as possible.

STONE CHECK DAM

CROSS SECTION



PROFILE VIEW

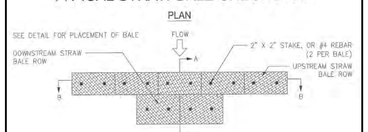


NOTES:
1. CHECK DAMS ARE TO BE USED ONLY IN SMALL OPEN CHANNELS (THEY ARE NOT TO BE USED IN LIVE STREAMS).
2. THE DRAINAGE AREA FOR STONE CHECK DAMS SHALL NOT EXCEED TWO ACRES.
3. THE CENTER OF THE CHECK DAM MUST BE AT LEAST 9 INCHES LOWER THAN THE OUTER EDGES.
4. THE DAM HEIGHT SHOULD BE A MAXIMUM OF 2 FEET FROM CENTER TO RIM EDGE.
5. THE SIDE SLOPES OF THE CHECK DAM SHALL NOT EXCEED A 2:1 SLOPE.
6. GEOTEXTILE SHALL BE USED TO PREVENT THE MITIGATION OF SUBGRADE SOIL PARTICLES INTO THE STONES (REFER TO AASHTO M288-96, SECTION 7.3, TABLE 3).

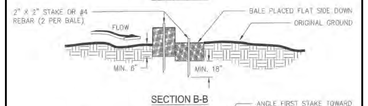
Figure 6-12.2

TYPICAL STRAW BALE CHECK DAM

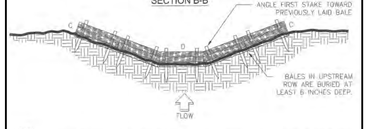
PLAN



SECTION A-A



SECTION B-B



NOTES:
1. BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.
3. POINT C OF SECTION B-B SHOULD ALWAYS BE HIGHER THAN POINT D.
4. STRAW-BALE CHECK DAMS SHALL NOT BE USED WHERE THE DRAINAGE AREA EXCEEDS ONE ACRE.

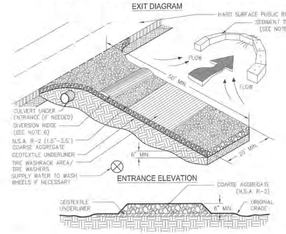
Figure 6-12.3

CD-HB

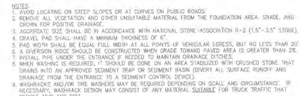
MAINTENANCE
The exit shall be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with 1.5-3.5 inch stone, as conditions demand, and repair and/or cleanout of any structures to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed immediately.

CRUSHED STONE CONSTRUCTION EXIT

EXIT DIAGRAM



ENTRANCE ELEVATION



NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA. GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"- 3.5" STONE).
4. GRADED TO A MINIMUM THICKNESS OF 8".
5. WIDTH SHALL BE EQUAL TO FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DOVER ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Figure 6-14.1

CO

Temporary Sediment Trap — Sd4

DEFINITION
A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.

PURPOSE
To collect and store sediment from uphill sites cleared and or graded during construction. Intended for use on small tributary areas with no unusual drainage features. Effective against coarse sediment, but not against silt or clay particles that remain suspended.

CONDITIONS
Temporary sediment traps are constructed early in the construction process at locations that will require minimal clearing and grading. Natural draws or swells are favorable locations to build the traps. They should be easily accessible for frequent maintenance and inspections. Temporary sediment traps shall never be placed in live streams.

DESIGN CRITERIA
Design and construction shall comply with laws, ordinances, rules and regulations on the local, state and federal level.

The total drainage area of a temporary sediment trap is up to 5 acres, depending on type of construction.

The height of a temporary sediment trap embankment shall not exceed 5.5 feet as measured from the downstream toe of slope to the top of the berm. Top width of an embankment shall be at least as wide as the height of the sediment trap embankment, with a minimum width of 3 feet.

Maximum pond depth of a sediment trap is 4 feet as measured from the bottom of the trap to the invert of the emergency spillway. Slopes shall not exceed 2:1 (H:V) for excavated areas and for compacted embankments. Side slopes should be (2:1) or flatter allowing people and equipment to safely negotiate slopes or to enter the sediment trap.

The length to width ratio must be greater than (2:1) (L:W) for the principal flowpaths in order to maximize residence time of stormwater within the sediment trap. Baffles may be required to prevent short-circuiting of the flow.

A typical baffle design uses 4'x8' sheets of exterior grade plywood 1/2 inch thick, mounted on 4"x4" hardwood posts.

Volume
Minimum volume of a temporary sediment trap shall be 67 cubic yards per acre for the total drainage area. The volume shall be measured at an elevation equivalent to the spillway invert.

Volume of a temporary sediment trap in heavily disturbed areas should be 134 cubic yards per acre for the total drainage area. This includes an upper area with a minimum of 67 cubic yards per acre drained, which is dewatered using one of the outlet design methods provided, and a lower wet zone for sediment storage and settling.

The volume should be calculated from existing and proposed contours, or by measured cross sections. An approximate method for calculating the volume of traps using a natural draw is:

V = 0.4 x A x D
V = Sediment storage volume (below invert of emergency spillway)
A = Surface area (at level of emergency spillway)
D = Maximum depth (from emergency spillway invert)

The cleanout volume for a temporary sediment trap is 1/3 of the total storage volume. Cleanout volume shall be calculated and marked with a stake at the outlet of the trap.

CONSTRUCTION SPECIFICATIONS
The basic design guidlines are applicable to the type of temporary sediment trap constructed. The main differences are with regards to the type of outlet structures. The following types of construction are acceptable under the designated conditions:

Overflow (Sd4-A)
An overflow temporary sediment trap is suitable for small areas less than 1 acre, typically with gentle slopes (1 or 2 percent) and without major grading operations. The maximum life span of an overflow trap is 6 months. If water enters the trap with low velocities, the largest amount of water will be slowly displaced and leave the other end of the sediment trap. Silt fence, straw bale barriers or grass filter strips are used to "polish" the overflow water as it leaves the sediment trap. See Figure 6-30.1

Combination Straw Bale and Silt Fence Outlet (Sd4-B)
The combination outlet uses straw bales and silt fence to detain the sediment trap. Proper installation and staking of the straw bales, and wire backing of the silt fence are required for the material to resist 1 foot or more of ponded water. The combination straw bale and silt fence outlet is limited to 1 acre total drainage area, and has a life span of less than 1 year. This type of outlet requires frequent maintenance and inspections to ensure the released stormwater is free from sediment. See Figure 6-30.2

Rock Outlet (Sd4-C)
The rock outlet relies on filtering through layers of aggregate, rock or riprap material to dewater the sediment trap. It is the sturdiest of the sediment trap designs and generally requires less maintenance. It can be used for drainage area up to 5 acres and has a life span of 1 year. See Figure 6-30.3

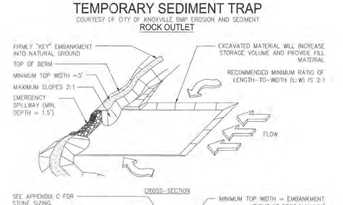
Emergency Spillway
The emergency overflow outlet of a temporary sediment trap must be stabilized with rock, geotextile, vegetation, or another suitable material that is resistant to erosion. It must be installed to safely convey stormwater runoff for the 10-year storm event.

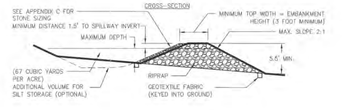
REFERENCE:
City of Knoxville BMP Manual Best Management Practices, Knoxville, TN, May 2003

TEMPORARY SEDIMENT TRAP

COURTESY OF CITY OF KNOXVILLE BMP EROSION AND SEDIMENT

ROCK OUTLET





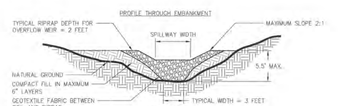


Figure 6-30.3

SD4-C

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.

2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

DESCRIPTION OF STORM WATER POLLUTION DISCHARGE PREVENTION PRACTICES

1. THE FOLLOWING IS A DESCRIPTION OF THE PRACTICES TO BE USED BUT NOT LIMITED TO :
   - A. CONSTRUCTION EXIT
   - B. SILT FENCING
   - C. TEMPORY SEDIMENT BASINS
   - D. HAY BALE CHECK DAMS
   - E. STONE CHECK DAMS
   - F. STORM OUTLET PROTECTION
   - G. GRASSING
   - ~~H. DETENTION POND~~
   - ~~I. SKIMMER~~
   - J. DUST CONTROL
   - K. CONCRETE WASHDOWN PIT

LEVEL II CERTIFICATION NO. 2104 ISSUED 11-5-05 EXPIRES 11-15-26

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

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DESIGNED	DRAWN	CHECKED
---	MAB	---

DATE : NOV. 26, 2024
JOB NO. ---
SCALE: as shown

SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

NOTES AND DETAILS

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED
Mark Boswell
No. 28372
PROFESSIONAL
11-26-24
ENGINEER
MARK A. BOSWELL

DRAWING NUMBER
C-22
22 OF 28 SHEETS

Inlet Sediment Trap Sd2

DEFINITION
A temporary protective device formed at or around an inlet to a storm drain to trap sediment.

PURPOSE
To prevent sediment from entering a storm drainage systems prior to permanent stabilization of the disturbed area draining to the inlet.

CONDITIONS
All storm drain drop inlets that receive runoff from disturbed areas.

DESIGN CRITERIA
Through testing there are two different categories (high retention and high flow) supported. In areas where BMPs are being used on paved surfaces, or safety is a concern, the potentially negative effects of ponding should be taken into account. In such cases, a high flow BMP is preferred.

On unpaved areas where ponding will not cause a safety hazard, high retention shall be taken into account. If high retention is not used in this situation a rationale shall be given on the plan and an unpaved application should apply.

Sediment traps must be self-draining unless they are otherwise protected in an approved fashion that will not present a safety hazard. The drainage area entering the inlet sediment trap shall be no greater than one acre.

If runoff may bypass the protected inlet, a temporary dike should be constructed on the down slope side of the structure. Also, a stone filter ring may be used on the up slope side of the inlet to slow runoff and filter larger soil particles. Refer to **Fr-Stone Filter Ring**.

CONSTRUCTION SPECIFICATIONS
Excavated Inlet Sediment Trap
An excavation may be created around the inlet sediment trap to provide additional sediment storage. The trap shall be sized to provide a minimum storage capacity calculated at the rate of 67 cubic yards per acre of drainage area. A minimum depth of 1.5 feet for sediment storage should be provided. Side slopes shall not be steeper than 2:1.

Sediment traps may be constructed on natural ground surface, on an excavated surface, or on machine compacted fill, provided they have a non-erodible outlet.

Filter Fabric with Supporting Frame Sd2 -F

This method of inlet protection is applicable where the inlet drains a relatively flat area (slope no greater than 5%) and shall not apply to inlets receiving concentrated flows, such as in street or highway medians. As shown in Figure 6-28.1, Type S silt fence supported by steel posts should be used. The stakes shall be spaced evenly around the perimeter of the inlet a maximum of 3 feet apart, and securely driven into the ground, approximately 18 inches deep. The fabric shall be 36 inches tall and entrenched 12 inches and backfilled with crushed stone or compacted soil. Fabric and wire shall be securely fastened to the posts, and fabric ends must be overlapped a minimum of 18 inches or wrapped together around a post to provide a continuous fabric barrier around the inlet.

Baffle Box Sd2 -B

For inlets receiving runoff with a higher volume or velocity, a baffle box inlet sediment trap should be used. As shown in Figure 6-28.2, the baffle box shall be constructed of 2" x 4" boards spaced a maximum of 1 inch apart or of plywood with weep holes 2 inches in diameter. The weep holes shall be placed approximately 6 inches on center vertically and horizontally. Gravel shall be placed outside the box, all around the inlet, to a depth of 2 to 4 inches. The entire box is wrapped

in Type C filter fabric that shall be entrenched 12 inches and backfilled.

Block and Gravel Drop Inlet Protection Sd2 -Bg

This method of inlet protection is applicable where heavy flows are expected and where an overflow capacity is necessary to prevent excessive ponding around the structure. As shown in Figure 6-28.3, one block is placed on each side of the structure on its side in the bottom row to allow pool drainage. The foundation should be excavated at least 2 inches below the crest of the storm drain. The bottom row of blocks is placed against the edge of the storm drain for lateral support and to avoid washouts when overflow occurs. If needed, lateral support may be given to subsequent rows by placing 2" x 4" wood studs through block openings. Hardware cloth or comparable wire mesh with 1/2 inch openings shall be fitted over all block openings to hold gravel in place. Clean gravel should be placed 2 inches below the top of the block on a 2:1 slope or flatter and smoothed to an even grade. DOT #57 washed stone is recommended.

Gravel drop Inlet Protection Sd2-G

This method of inlet protection is applicable where heavy concentrated flows are expected. As shown in Figure 6-28.4, stone and gravel are used to trap sediment. The slope toward the inlet shall be no steeper than 2:1. A minimum 1 foot wide level stone area shall be left between the structure and around the inlet to prevent gravel from entering the inlet. On the slope toward the inlet, stone 3 inches in diameter and larger should be used. On the slope away from the inlet, 1/2 to 3/4 inch gravel (#57 washed stone) should be used at a minimum thickness of 1 foot.

Sod Inlet Protection Sd2-S

This method of inlet protection is applicable only at the time of permanent seeding, to protect the inlet from sediment and mulch material until permanent vegetation has become established. As shown in Figure 6-28.5, the sod shall be placed to form a turf mat covering the soil for

a distance of 4 feet from each side of the inlet structure. Sod strips shall be staggered so that adjacent strip ends are not aligned.

Curb Inlet Protection Sd2-P

Once pavement has been installed, a curb inlet filter shall be installed on inlets receiving runoff from disturbed areas. This method of inlet protection shall be removed if a safety hazard is created.

One method of curb inlet protection uses "pigs-in-a-blanket"- 8-inch concrete blocks wrapped in filter fabric. See Figure 6-28.6. Another method uses gravel bags constructed by wrapping DOT #57 stone with filter fabric, wire, plastic mesh, or equivalent material.

A gap of approximately 4 inches shall be left between the inlet filter and the inlet to allow for overflow and prevent hazardous ponding in the roadway. Proper installation and maintenance are crucial due to possible ponding in the roadway, resulting in a hazardous condition. Several other methods are available to prevent the entry of sediment into storm drain inlets.

Figure 6-28.7 shows one of these alternative methods.

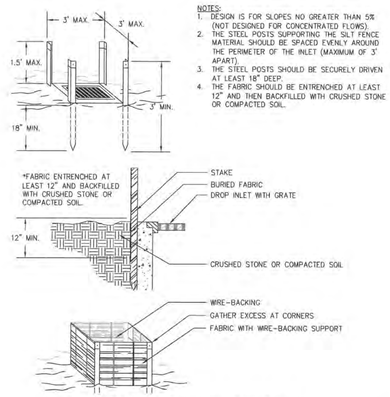
MAINTENANCE
The trap shall be inspected daily and after each rain, and repairs made as needed. Sediment shall be removed when the sediment has accumulated to one-half the height of the trap. Sediment shall be removed from curb inlet protection immediately. For excavated inlet sediment traps, sediment shall be removed when one-half of the sediment storage capacity has been lost to sediment accumulation. Sod inlet protection shall be maintained as specified in **Ds4 - Disturbed Area Stabilization (With Sodding).**

Sediment shall not be washed into the inlet. It shall be removed from the sediment trap, disposed of and stabilized so that it will not enter the inlet again.

When the contributing drainage area has been permanently stabilized, all materials and any sediment shall be removed, and either salvaged or disposed of properly. The disturbed area shall be brought to proper grade, then smoothed and compacted. Appropriately stabilize all disturbed areas around the inlet.

FABRIC AND SUPPORTING FRAME FOR INLET PROTECTION

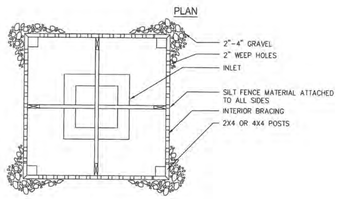
STEEL FRAME AND TYPE C SILT FENCE INSTALLATION



NOTES:
1. DESIGN IS FOR SLOPES NO GREATER THAN 5% (NOT DESIGNED FOR CONCENTRATED FLOWS).
2. THE STEEL POSTS SUPPORTING THE SILT FENCE MATERIAL SHOULD BE SPACED EVENLY AROUND THE PERIMETER OF THE INLET (MAXIMUM OF 3' APART).
3. THE STEEL POSTS SHOULD BE SECURELY DRIVEN AT LEAST 18" DEEP.
4. THE FABRIC SHOULD BE ENTRENCHED AT LEAST 12" AND THEN BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL.

Figure 6-28.1 - Fabric and Supporting Frame For Inlet Projection

PLAN



SIDE

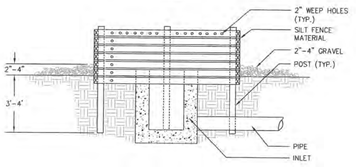
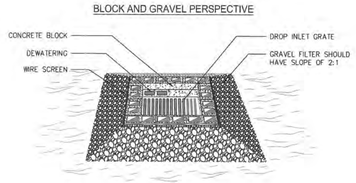
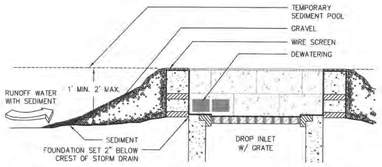


Figure 6-28.2 Baffle Box

BLOCK AND GRAVEL PERSPECTIVE



BLOCK AND GRAVEL SECTION



NOTE:
1. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH ½ INCH OPENINGS SHALL BE FITTED OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
2. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. THE FIRST ROW OF BLOCKS WILL BE PLACED HERE FOR LATERAL SUPPORT.
3. ONE BLOCK (AS SHOWN) IS TO BE PLACED ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW FOR POOL DRAINAGE.

Figure 6-28.3 Block and Gravel Drop Inlet Protections

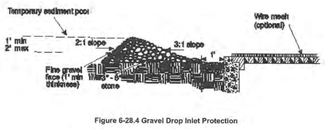


Figure 6-28.4 Gravel Drop Inlet Protection

SOD STRIPS PROTECT INLET AREA FROM EROSION
(SOURCE: VA SWCC)

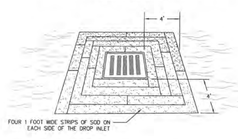
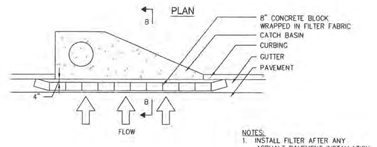
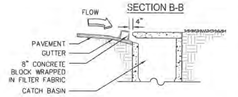


Figure 6-28.5 Sod Inlet Protection

CURB INLET FILTER "PIGS IN BLANKET"



SECTION B-B



NOTES:
1. INSTALL FILTER AFTER ANY ASPHALT PAVEMENT INSTALLATION.
2. WRAP 8" CONCRETE BLOCKS IN FILTER FABRIC AND SPAN ACROSS CATCH BASIN INLET.
3. FACE OPENINGS IN BLOCKS OUTWARD.
4. LEAVE A GAP OF APPROXIMATELY 4 INCHES BETWEEN THE CURB AND THE FILTERS TO ALLOW FOR OVERFLOW TO PREVENT HAZARDOUS PONDING.
5. INSTALL OUTLET PROTECTION BELOW STORM DRAIN OUTLETS.

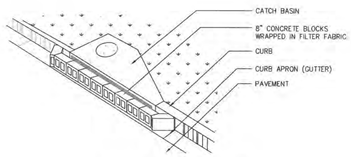


Figure 6-28.6 Curb Inlet Filter "Pigs in Blanket"

TO BE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN

If the **EXCAVATED INLET SEDIMENT TRAP** is used, show the following information:

1. **Drainage area** = _____ ac
2. Required sediment storage = 67 cy/ac * drainage area
   Required sediment storage = 67 cy/ac * _____ ac
   Required sediment storage = _____ cy = _____ cf
3. Assume excavation **depth** (minimum of 1.5 ft.) = _____ ft
4. Assume **slope of sides** (shall not be steeper than 2:1) = ___ :1
5. Determine required surface area
   SA_{ss} = Required sediment storage / excavation depth
   SA_{ss} = _____ cy / _____ ft
   SA_{ss} = _____ sf
6. Assume shape of excavation and determine dimensions.
   (A rectangular shape with 2:1 length to width ratio is recommended.)
   Shape: _____
   Dimensions: l = _____ ft w = _____ ft diameter (*if applicable*) = _____ ft

Provide a detail showing the depth, length and width, or diameter (*if applicable*), and side slopes of the excavation.

Figure 6-28.7 Equivalent Inlet Sediment Trap

DESCRIPTION OF STORM WATER POLLUTION DISCHARGE PREVENTION PRACTICES

1. THE FOLLOWING IS A DESCRIPTION OF THE PRACTICES TO BE USED BUT NOT LIMITED TO :
   - A. CONSTRUCTION EXIT
   - B. SILT FENCING
   - C. TEMPORY SEDIMENT BASINS
   - D. HAY BALE CHECK DAMS
   - E. STONE CHECK DAMS
   - F. STORM OUTLET PROTECTION
   - G. GRASSING
   - ~~H. RETENTION POND~~
   - ~~I. SKIMMER~~
   - J. DUST CONTROL
   - K. CONCRETE WASHDOWN PIT

WASTE DISPOSAL :

1. Locate waste collection areas away from streets, gutters, watercourses and storm drains. Waste collection areas, such as dumpsters, are often best located near construction site entrances to minimize traffic on disturbed soils. The plan should include secondary containment around liquid waste collection areas to further minimize the likelihood of contaminated discharges. Solid materials, including building materials, shall not be discharged to waters of the State, except as authorized by a Section 404 permit.

STORMWATER SAMPLING SAMPLE ANALYSIS

1. Storm water samples are to be analyzed in accordance with methodology and test procedures established by 40 CFR Part 136 and the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001."

2. Storm water is to be for nephelometric turbidity units (NTU) at the outfall location. A discharge of storm water runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation for each day on which such conditions results in the turbidity of the discharge exceeding 75, the value that was selected from Appendix B in Permit No. GAR 100001. The NTU is based upon the disturbed acreage of 0.97 acres for the project site, the surface water drainage area of < 5.0 square miles, and receiving water which supports warm water fisheries.

27.
BUILDING MATERIALS COVER NOTES :

1. Building materials and building products which are stored outside on site are to be covered as soon as they arrive on site if not used the same day they arrive on site. Cover shall include but not be limited to tarps, heavy plastic or any other impervious material which will not allow run-off from the materials from rain events.

2. Building materials and building products may be stored inside building if building has been "dried in" in lieu of storing and covering outside.

POLUTANTS POTENTIALLY FOUND ON SITE (DUE TO CONSTRUCTION ACTIVITIES)

1. Gasoline
2. Diesel fuel
3. Motor Oil
4. Hydraulic Fluid
5. Paints
6. Solvents
7. Concrete

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26.
INSTALLED MEASURES TO CONTROL POLLUTANTS AFTER CONSTRUCTION COMPLETION :

1. ~~The storm water detention pond shall remain in place, stabilized and functional at all times after construction has been completed.~~

2. The storm water pipes and outfall swales shall remian in place, stabilized and funtional at all times after construction has been completed.

3. Rip-rap used at outlets which are used for velocity dissipation are to remain in place and funtional at all times. These measures are to provide non-erosive flow so that the natural physical and biological characteristics and funtions of the water course are maintained and protected.

4. Final stabilization shall remain in place (permanent vegetation, sod, vegetated swales,etc.).

5. Installation of these devices may be subject to section 404 of the Federal Clean Water Act.

6. The primary permittee is only responsible for the installation and maintenance of storm water management devices prior to final stabilization of the site and not the operation and maintenance of such structures after construction activities have been completed.

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DESIGNED	DRAWN	CHECKED
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GEORGIA REGISTERED
Mark A. Boswell
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11-26-24
ENGINEER
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DRAWING NUMBER
C-23
23 OF 28 SHEETS

Disturbed Area Stabilization (With Mulching Only) Ds1

DEFINITION
Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

PURPOSE
- To reduce runoff and erosion
- To conserve moisture
- To prevent surface compaction or crusting
- To control undesirable vegetation
- To modify soil temperature
- To increase biological activity in the soil

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored and have a continuous 90% cover or greater of the soil surface.

Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months.

If any area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed. Refer to **Ds2 -Disturbed Area Stabilization (With Temporary Seeding), Ds3 - Disturbed Area Stabilization (With Permanent Seeding), and Ds4 - Disturbed Area Stabilization (With Sodding).**

SPECIFICATIONS
Mulching Without Seeding
This standard applies to graded or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation

1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials
Select one of the following materials and apply at the depth indicated:

1. Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
2. Wood waste (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and re-used.

Applying Mulch
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.

1. Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.
2. If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.
3. Apply polyethylene film on exposed areas.

Anchoring Mulch
1. Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application.

   Straw or hay mulch spread with special blower-type equipment may be anchored. Tackifers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification **Tac-Tackifers.** Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

Disturbed Area Stabilization (With Temporary Seeding) Ds2

DEFINITION
The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

PURPOSE
- To reduce runoff and sediment damage of down stream resources
- To protect the soil surface from erosion
- To improve wildlife habitat
- To improve aesthetics
- To improve tilth, infiltration and aeration as well as organic matter for permanent plantings

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. If an area is expected to be undisturbed for longer than six months, permanent perennial vegetation shall be used. If optimum planting conditions for temporary grassing is lacking, mulch can be used as a singular erosion control device for up to six months but it shall be applied at the appropriate depth, anchored, and have a continuous 90% cover or greater of the soil surface. Refer to specification **Ds1-Disturbed Area Stabilization (With Temporary Seeding).**

CONDITIONS
Temporary vegetative measures should be coordinated with permanent measures to assure economical and effective stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established. Note: Some species of temporary vegetation are not appropriate for companion crop plantings because of their potential to out-compete the desired species (e.g. annual ryegrass). Contact NRCS or the local SWCD for more information.

SPECIFICATIONS
Grading and Shaping
Excessive water run-off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others.

No shaping or grading is required if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeding equipment is to be used.

Seedbed Preparation
When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or hand-seeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall.

When soil has been sealed by rainfall or consists of smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provide a place for seed to lodge and germinate.

Lime and Fertilizer
Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate determined by soil test for pH. Quick acting lime should be incorporated to modify pH during the germination period. Bio stimulants should also be considered when there is less than 3% organic matter in the soil. Graded areas require lime application. Soils must be tested to determine required amounts of fertilizer and amendments. Fertilizer should be applied before land preparation and incorporated with a disk, ripper, or chisel. On slopes too steep for, or inaccessible to equipment, fertilizer shall be hydraulically applied, preferably in the first pass with seed and some hydraulic mulch, then topped with the remaining required application rate.

Seeding
Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker-seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed one-quarter to one-half inch deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand. See Table 6-4.1

Mulching
Temporary vegetation can, in most cases, be established without the use of mulch, provided there is little to no erosion potential. However, the use of mulch can often accelerate and enhance germination and vegetation establishment. Mulch without seeding should be considered for short term protection. Refer to **Ds1 - Disturbed Area Stabilization (With Mulching Only).**

Irrigation
During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

Table 6-4.1 - Temporary Cover or Companion Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR TEMPORARY COVER OR COMPANION CROPS [1]

Species	Broadcast Rates: Rate Per Acre[2]	Broadcast Rates: Pure Live Seed (PLS) Per 1000 sqft	Resource Area[3]	Planting Dates by Resource Area (Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates.) J F M A M J J A S O N D	Remarks
BARLEY *Hordeum vulagre*					
alone	3 bu. (144 lbs)	3.3 lbs	M-L	----	14,000 seed per pound. Winter hardy. Use on productive soils.
in mixture	1/2 bu. (24lbs)	0.6 lb	P	----	
			C	----	
LESPEDEZA, ANNUAL *Lespedeza striata*					
alone	40 lbs	0.9 lb	M-L	---- ----	200,000 seed per pound. May volunteer for several years. Use inoculant EL.
in mixture	10 lbs	0.2 lb	P	---- ----	
			C	---- ----	
LOVEGRASS, WEEPING *Eragrostis curvula*					
alone	4 lbs	0.1 lb	M-L	---- ----	1,500,000 seed per pound. May last for several years. Mix with *Serices lespedeza.*
in mixture	2 lbs	0.05 lb	P	---- ----	
			C	---- ----	
MILLET, BROWNTOP *Panicum fasciculatum*					
alone	40 lbs	0.9 lb	M-L	---- ----	137,000 seed per pound. Quick dense cover. Will provide excessive competion in mixtures if seeded at high rate.
in mixture	10 lbs	0.2 lb	P	---- ----	
			C	---- ----	
MILLET, PEARL *Pennesetum plaucum*					
alone	50 lbs	1.1 lbs	M-L	---- ----	88,000 seed per pound. Quick dense cover. May reach 5 feet in height. Not recommended for mixtures.
			P	---- ----	
			C	---- ----	
OATS *Avena sativa*					
alone	4 bu. (128 lbs)	2.9 lbs	M-L	---- ----	13,000 seed per pound. Use on productive soils. Not as a winter hardy as rye or barley.
in mixture	1 bu. (32 lbs)	0.7 lb	P	---- ----	
			C	---- ----	
RYE *Secale cereale*					
alone	3 bu. (168 lbs)	3.9 lbs	M-L	---- ----	18,000 seed per pound. Quick cover. Drought tolerant and winter hardy.
in mixture	1/2 bu. (28 lbs)	0.6 lb	P	---- ----	
			C	---- ----	
RYEGRASS, ANNUAL *Lolium temulentum*					
alone	40 lbs	0.9 lb	M-L	---- ----	227,000 seed per pound. Dense cover. Very competitive and is not to be used in mixtures.
			P	---- ----	
			C	---- ----	
SUDANGRASS *Sorghum sudanese*					
alone	60 lbs	1.4 lbs	M-L	---- ----	95,000 seed per pound. Good on droughty sites. Not recommended for mixtures.
			P	---- ----	
			C	---- ----	
TRITICALE *X-Triticosecale*					
alone	3 bu. (144 lbs)	3.3 lbs	C	---- ----	Use on lower part of Southern Coastal Plain and in Atlantic Coastal Flatwoods only.
in mixture	1/2 bu. (24 lbs)	0.6 lb			
WHEAT *Triticum aestivum*					
alone	3 bu. (180 lbs)	4.1 lbs	M-L	---- ----	15,000 seed per pound. Winter hardy.
in mixture	1/2 bu. (30 lbs)	0.7 lb	P	---- ----	
			C	---- ----	

[1]Temporary cover crops are very competitive and will crowd out perennials if seeded too heavily.
[2]Reduce seeding rates by 50% when drilled.
[3]M-L represents the Mountain; Blue Ridge; and Ridges and Valleys MLRAs.
P represents the Southern Piedmont MLRA.
C represents Southern Coastal Plain; Sand Hills; Black Lands; and Atlantic Coast Flatwoods MLRAs.
(see Figure 6-4.1, p. 6-40)

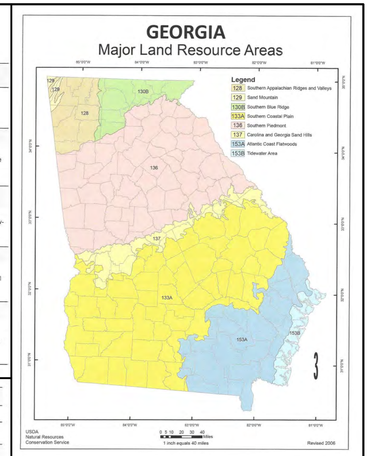

Figure 6-4.1

DESCRIPTION OF STORM WATER POLLUTION DISCHARGE PREVENTION PRACTICES

1. THE FOLLOWING IS A DESCRIPTION OF THE PRACTICES TO BE USED BUT NOT LIMITED TO :
   - A. CONSTRUCTION EXIT
   - B. SILT FENCING
   - C. TEMPORY SEDIMENT BASINS
   - D. HAY BALE CHECK DAMS
   - E. STONE CHECK DAMS
   - F. STORM OUTLET PROTECTION
   - G. GRASSING
   - ~~H. DETENTION POND~~
   - ~~I. SKIMMER~~
   - J. DUST CONTROL
   - K. CONCRETE WASHDOWN PIT

LEVEL II CERTIFICATION NO. 2104 ISSUED 11-5-05 EXPIRES 11-15-26

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.
2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

SCALE: 1" = 20'
0 20' 40' 50'

REVISIONS

BOSWELL DESIGN SERVICES, INC.
OFFICE : 4700 EAST HIGHWAY 80
Unit K, Suite 1
MAILING : 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED: ---
DRAWN: MAB
CHECKED: ---
DATE: NOV. 26, 2024
JOB NO. ---
SCALE: as shown

SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

SOIL EROSION AND SEDIMENT CONTROL NOTES

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER
1-800-282-7411

GEORGIA REGISTERED PROFESSIONAL ENGINEER
No. 26372
11-26-24
MARK A. BOSWELL

DRAWING NUMBER
C-24
24 OF 28 SHEETS

Disturbed Area Stabilization (With Permanent Vegetation)

Ds3

DEFINITION

The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization. Permanent perennial vegetation shall be used to achieve final stabilization.

PURPOSE

- •To protect the soil surface from erosion
- •To reduce damage from sediment and runoff to down-stream areas
- •To improve wildlife habitat and visual resources
- •To improve aesthetics

REQUIREMENT FOR REGULATORY COMPLIANCE

This practice shall be applied immediately to rough graded areas that will be undisturbed for longer than six months. This practice or sodding shall be applied immediately to all areas at final grade. **Final Stabilization** means that all soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by the GA EPD for waste disposal, 100% of the soil surface is uniformlycovered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures. Permanent vegetation shall consist of, planted trees, shrubs, perennial vines; or a crop of perennial vegetation appropriate for the region, such that within the growing season a 70% coverage by perennial vegetation shall be achieved. Final stabilization applies to each phase of construction. For linear construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use. Until this standard is satisfied and permanent control measures and facilities are operational, interim stabilization measures and temporary erosion and sedimentation control measures shall not be removed.

CONDITIONS

Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas.

PLANNING CONSIDERATIONS

1. Use conventional planting methods where possible.
2. When mixed plantings are done during marginal planting periods, companion crops shall be used.
3. No-till planting is effective when planting is done following a summer or winter annual cover crop. Sericea lespedeza planted no-till into stands of rye is an excellent procedure.
4. Block sod provides immediate cover. It is especially effective in controlling erosion adjacent to concrete flumes and other structures. Refer to Specification **Ds4-Disturbed Area Stabilization (With Sodding)**.
5. Irrigation should be used when the soil is dry or when summer plantings are done.
6. Low maintenance plants, as well as natives, should be used to ensure long-lasting erosion control.
7. Mowing should not be performed during the quail nesting season (May to September).
8. Wildlife plantings should be included in critical area plantings.

Wildlife Plantings

Commercially available plants beneficial to wildlife species include the following:

Mast Bearing Trees

Beech, Black Cherry, Blackgum, Chestnut, Chinkapin, Hackberry, Hickory, Honey Locust, Native Oak, Persimmon, Sawtooth Oak and Sweetgum.

All trees that produce nuts or fruits are favored by many game species. Hickory provides nuts used mainly by squirrels and bear.

Shrubs and Small Trees

Bayberry, Bicolor Lespedeza, Crabapple, Dogwood, Huckleberry or Native Blueberry, Mountain Laurel, Native Holly, Red Cedar, Red Mulberry, Sumac, Wax Myrtle, Wild Plum and Blackberry.

Plant in patches without tall trees to develop stable shrub communities. All produce fruits used by many kinds of wildlife, except for lespedeza that produces seeds used by quail and songbirds.

Grasses, Legumes, Vines and Temporary Cover

Bahiagrass, Bermudagrass, Grass-Legume mixtures, Partridge Pea, Annual Lespedeza, Orchardgrass (for mountains), Browntop Millet (for temporary cover), and Native grapes.

Provides herbaceous cover in clearings for a game bird brood-rearing habitat. Appropriate legumes such as vetches, clovers, and lespedezas may be mixed with grass, but they may die out after a few years.

CONSTRUCTION SPECIFICATIONS

Grading and Shaping

Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching and maintenance of the vegetation.

Concentrations of water that will cause excessive soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications.

Lime and Fertilizer Rates and Analysis

Agricultural lime is required at the rate of one to two tons per acre unless soil tests indicate otherwise. Graded areas require lime application. If lime is applied within six months of planting permanent perennial vegetation, additional lime is not required. Agricultural lime shall be within the specifications of the Georgia Department of Agriculture.

Lime spread by conventional equipment shall be "ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve.

Fast-acting lime spread by hydraulic seeding equipment should be "finely ground limestone" spanning from the 180 micron size to the 5 micron size. Finely ground limestone is calcitic or dolomitic limestone ground so that 95 percent of the material will pass through a 100-mesh sieve.

It is desirable to use dolomitic limestone in the Sand Hills, Southern Coastal Plain and Atlantic Coast Flatwoods MLRAs. (See Figure 6-4.1)

Agricultural lime is generally not required where only trees are planted.

Initial fertilization, nitrogen, topdressing, and maintenance fertilizer requirements for each species or combination of species are listed in Table 6-5.1.

Lime and Fertilizer Application

When *hydraulic seeding* equipment is used, the initial fertilizer shall be mixed with seed, innoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The innoculant, if needed, shall be mixed with the seed prior to being placed into the hydraulic seeder. The slurry mixture will be agitated during application to keep the ingredients thoroughly mixed. The mixture will be spread uniformly over the area within one hour after being placed in the hydroseeder.

Finely ground limestone can be applied in the mulch slurry or in combination with the top dressing.

When *conventional planting* is to be done, lime and fertilizer shall be applied uniformly in one of the following ways:

1. Apply before land preparation so that it will be mixed with the soil during seedbed preparation.
2. Mix with the soil used to fill the holes, distribute in furrows.
3. Broadcast after steep surfaces are scarified, pitted or trenched.
4. A fertilizer pellet shall be placed at root depth in the closing hole beside each pine tree seedling.

Plant Selection

Refer to Tables 6-4.1, 6-5.2, 6-5.3 and 6-5.4 for approved species. Species not listed shall be approved by the State Resource Conservationist of the Natural Resources Conservation Service before they are used.

Plants shall be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area; time of year of planting, method of planting; and the needs and desires of the land user.

Some perennial species are easily established and can be planted alone. Examples of these are Common Bermuda, Tall Fescue, and Weeping Lovegrass.

Other perennials, such as Bahia Grass and Sericea Lespedeza, are slow to become established and should be planted with another perennial species. The additional species will provide quick cover and ample soil protection until the target perennial species become established. For example, Common seeding combinations are 1) Weeping Lovegrass with Sericea Lespedeza (scarified) and 2) Tall Fescue with Sericea Lespedeza (unscarified).

Plant selection may also include annual companion crops. Annual companion crops should be used only when the perennial species are not planted during their optimum planting period. A common mixture is Brown Top Millet with Common Bermuda in mid-summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

Ryegrass shall not be used in any seeding mixtures containing perennial species due to its ability to out-compete desired species chosen for permanent perennial cover.

Seed Quality

The term "pure live seed" is used to express the quality of seed and is not shown on the label. Pure live seed, PLS, is expressed as a percentage of the seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination; i.e.,

(PLS = % germination x % purity)

EXAMPLE:

Common Bermuda seed
70% germination, 80% purity

PLS = 70% germination x 80% purity

PLS = 56%

The percent of PLS helps you determine the amount of seed you need. If the seeding rate is 10 pounds PLS and the bulk seed is 56 % PLS, the bulk seeding rate is:

$$\frac{10 \text{ lbs. PLS/acre}}{56\% \text{ PLS}} = 17.9 \text{ lbs/acre}$$

You would need to plant 17.9 lbs/acre to provide 10 lbs/acre of pure live seed.

Seedbed Preparation

Seedbed preparation may not be required where hydraulic seeding and fertilizing equipment is to be used (but is strongly recommended for any seeding process, when possible). When conventional seeding is to be used, seedbed preparation will be done as follows:

Broadcast plantings

1. Tillage, at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches; alleviate compaction; incorporate lime and fertilizer; smooth and firm the soil; allow for the proper placement of seed, sprigs, or plants; and allow for the anchoring of straw or hay mulch if a disk is to be used.
2. Tillage may be done with any suitable equipment.
3. Tillage should be done on the contour where feasible.
4. On slopes too steep for the safe operation of tillage equipment, the soil surface shall be pitted or trenched across the slope with appropriate hand tools to provide two places 6 to 8 inches apart in which seed may lodge and germinate. Hydraulic seeding may also be used.

Individual Plants

1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
3. Where pine seedlings are to be planted, subsoil under the row 36 inches deep on the contour four to six months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September.

Inoculants

All legume seed shall be inoculated with appropriate nitrogen-fixing bacteria. The inoculant shall be a pure culture prepared specifically for the seed species and used within the dates on the container.

A mixing medium recommended by the manufacturer shall be used to bond the inoculant to the seed. For conventional seeding, use twice the amount of inoculant recommended by the manufacturer. For hydraulic seeding, four times the amount of inoculant recommended by the manufacturer shall be used.

All inoculated seed shall be protected from the sun and high temperatures and shall be planted the same day inoculated. No inoculated seed shall remain in the hydroseeder longer than one hour.

Planting

Hydraulic Seeding

Mix the seed (inoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within one hour after the mixture is made.

Conventional Seeding

Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a culti-packer-seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil for small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment.

No-Till Seeding

No-till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No-till seeding shall be done with appropriate no-till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

Individual Plants

Shrubs, vines and sprigs may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots.

Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The tips of vines and sprigs must be at or slightly above the ground surface.

Where individual holes are dug, fertilizer shall be placed in the bottom of the hole, two inches of soil shall be added and the plant shall be set in the hole.

Mulching

Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall achieve 75% to 100% soil cover. When selecting a mulch, design professionals should consider the mulch's functional longevity, vegetation establishment enhancement, and erosion control effectiveness. Select the mulching material from the following and apply as indicated:

1. *Dry straw or dry hay* of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
2. *Wood cellulose mulch* or *wood pulp fiber* shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding.
3. One thousand pounds of *wood cellulose* or *wood pulp fiber*, which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or steeper.
4. *Sericea Lespedeza* hay containing mature seed shall be applied at a rate of three tons per acre.
5. *Pine straw* or *pine bark* shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas.
6. When using temporary erosion control blankets or block sod, mulch is not required.
7. *Bituminous treated roving* may be applied on planted areas, slopes, in ditches or dry waterways to prevent erosion. Bituminous treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications.

Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when agitated in water. The fibers shall contain a dye to allow visual metering and aid in uniform application during seeding.

Applying Mulch

Straw or hay mulch will be spread uniformly within 24 hours after seeding and/or planting. The mulch may be spread by blower-type spreading equipment, other spreading equipment or by hand. Mulch shall be applied to cover 75% of the soil surface.

Wood cellulose or wood fiber mulch shall be applied uniformly with hydraulic seeding equipment.

Anchoring Mulch

Anchor straw or hay mulch immediately after application by one of the following methods:

1. *Hay and straw* mulch shall be pressed into the soil immediately after the mulch is spread. A special "packer disk"' or disk harrow with the disks set straight may be used. The disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disks shall be dull enough to press the mulch into the ground without cutting it, leaving much of it in an erect position. Mulch shall not be plowed into the soil.
2. *Synthetic tackifiers, binders or hydraulic mulch specifically designed to tack straw,* shall be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers shall be mixed and applied according to manufacturer's specifications. All tackifiers, binders or hydraulic mulch specifically designed to tack straw should be verified nontoxic through EPA 2021.0 testing. Refer to **Tackifiers-Tac**
3. *Rye or wheat* can be included with Fall and Winter plantings to stabilize the mulch. They shall be applied at a rate of one-quarter to one-half bushel per acre.
4. *Plastic mesh or netting* with mesh no larger than one inch by one inch may be needed to anchor straw or hay mulch on unstable soils and concentrated flow areas. These materials shall be installed and anchored according to manufacturer's specifications.

Bedding Material

Mulch is used as a bedding material to conserve moisture and control weeds in nurseries, ornamental beds, around shrubs, and on bare areas on lawns.

Material	Depth
Grain straw	4" to 6"
Grass Hay	4" to 6"
Pine needles	3" to 5"
Wood waste	4" to 6"

Irrigation

Irrigation will be applied at a rate that will not cause runoff.

Topdressing

Topdressing will be applied on all temporary and permanent (perennial) species planted alone or in mixtures with other species. Recommended rates of application are listed in Table 6-5.1.

Second Year and Maintenance Fertilization

Second year fertilizer rates and maintenance fertilizer rates are listed in Table 6-5.1.

Lime Maintenance Application

Apply one ton of agricultural lime every 4 to 6 years or as indicated by soil tests. Soil tests can be conducted to determine more accurate requirements, if desired.

Use and Management

Mow Sericea Lespedeza only after frost to ensure that the seeds are mature. Mow between November and March.

Bermudagrass, Bahiagrass and Tall Fescue may be mowed as desired. Maintain at least 6 inches of top growth under any use and management. Moderate use of top growth is beneficial after establishment.

Exclude traffic until the plants are well established. Because of the quail nesting season, mowing should not take place between May and September.

Table 6-5.1. Fertilizer Requirements

TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
1. Cool season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50-100 lbs./ac. 1/2/ — 30
2. Cool season grasses and legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	0-50 lbs./ac. 1/ — —
3. Ground covers	First Second Maintenance	10-10-10 10-10-10 10-10-10	1300 lbs./ac. 3/ 1300 lbs./ac. 3/ 1100 lbs./ac.	— — —
4. Pine seedlings	First	20-10-5	one 21-gram pellet per seedling placed in the closing hole	—
5. Shrub Lespedeza	First Maintenance	0-10-10 0-10-10	700 lbs./ac. 700 lbs./ac. 4/	—
6. Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac. 5/
7. Warm season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 800 lbs./ac. 400 lbs./ac.	50-100 lbs./ac. 2/6/ 50-100 lbs./ac. 2/ 30 lbs./ac.
8. Warm season grasses and legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50 lbs./ac./6/

1/ Apply in spring following seeding.
2/ Apply in split applications when high rates are used.
3/ Apply in 3 split applications.
4/ Apply when plants are pruned.
5/ Apply to grass species only.
6/ Apply when plants grow to a height of 2 to 4 inches.

Table 6-5.2- Permanent Cover Crops

PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER [1]

Species	Broadcast Rates Rate Per Acre²	Pure Live Seed (PLS) Per 1000 sqft	Resource Area³	Planting Dates by Resource Area Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates. J F M A M J J A S O N D	Remarks
BAHIA, PENSACOLA *Paspalum notatum*					
alone or with temporary cover	60 lbs	1.4 lbs	P		166,000 seed per pound. Low growing. Sod forming. Slow to establish. Plant with a companion crop. Will spread nto bermuda pastures and awns. Mix with Sericea lespedeza or weeping lovegrass.
with other perennials	30 lbs	0.7 lb	C		
BAHIA, WILMINGTON *Paspalum notatum*					
alone or with temporary cover	60 lbs	1.4 lb	M-L		
with other perennials	30 lbs	0.7 lb	P		Same as above.
BERMUDA, COMMON *Cynodon dactylon*					
Hulled seed alone	10 lbs	0.2 lb	P C		1,787,000 seed per pound. Quick cover. Low growing and sod forming. Full sun. Good for athletic fileds.
with other perennials	6 lbs	0.7 lb			
BERMUDA, COMMON *Cynodon dactylon* Unhulled seed					
with temporary cover	10 lbs	0.2 lb	P		Plant with winter annuals.
with other perennials	6 lbs	0.1 lb	C		Plant with Tall Fescue

Table 6-5.2- Permanent Cover Crops

PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER [1]

Species	Broadcast Rates Rate Per Acre²	Pure Live Seed (PLS) Per 1000 sqft	Resource Area³	Planting Dates by Resource Area Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates. J F M A M J J A S O N D	Remarks
BERMUDA SPRIGS *Cynodon dactylon*					
Coastal, Common, Midland, or Tift 44	40 cu ft or sod plugs 3' x3'	0.9 cu ft	M-L P		A cubic foot contains approximately 650 sprigs. A bushel contains 1.25 cubic feet or approximately 800 springs.
Coastal, Common, of Tift 44			C		Same as above.
Tift 78			C		Southern Coastal Plain only
CENTIPEDE *Eremochloa ophuiroides*	Block sod only		P C		Drought tolerant. Full sun or partial shade. Effective adjacent to concrete and in concentrated flow areas. Irrigation is needed until fully established. Do not plant near pastures. Winterhardy as far as north Athens and Atlanta
CROWNVETECH Coronilla varia					
with winter annuals or cool season grasses	15 lbs	0.3 lb	M-L P		100,000 seed per pound. Dense growth. Drought tolerant and fire resistant. Attractive rose, pink and white blossoms spring to late fall. Mix with 30 pounds of Tall fescue or 15 pounds of rye. Inoculate see with M inoculant. Use from North Atlanta and Northward.

Table 6-5.2- Permanent Cover Crops

PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER [1]

Species	Broadcast Rates Rate Per Acre²	Pure Live Seed (PLS) Per 1000 sqft	Resource Area³	Planting Dates by Resource Area Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates. J F M A M J J A S O N D	Remarks
FESCUE, TALL *Festuca arundinacea*					
alone	50 lbs	1.1 lb	M-L		227,000 seed per pound. Use alone only on better sites. Mix with perennial lespededza or Crownvetch. Apply topdressing in spring following fall plantings. Not for heavy use areas or athletic fields.
with other perennials	30 lbs	0.7 lb	P		
KUDZU *Pueraria thumbergiana*					
Plants or crowns	3' - 7' apart		ALL		Rapid and vigorous growth. Excellent in gully erosion control. Will climb. Good livestock forage.
LESPEDEZA SERICEA *Lespedeza cuneata*					
scarified	60 lbs	1.4 lb	M-L P C		350,000 seed per pound. Widely adapted. Low maintenace. Mix with Weeping lovegrass, Common bermuda, bahia, or tall fescue. Takes 2 to 3 years to become fully established. Excellent on roadbanks. Inoculate seed with EL inoculant.
unscarified	75 lbs	1.7 lb	M-L P C		Mix with Tall fesue or winter annuals.
seed- bearing hay	3 tons	1338 lbs	M-L P C		Cut when seed mixture is mature, but before, it shatters. Add Tall fescue or winter annuals.

Table 6-5.2- Permanent Cover Crops

PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER [1]

Species	Broadcast Rates Rate Per Acre²	Pure Live Seed (PLS) Per 1000 sqft	Resource Area³	Planting Dates by Resource Area Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates. J F M A M J J A S O N D	Remarks
LESPEDEZA Ambro virgata *Lespedeza virgata DC* or Appalow *Lespedeza cuneata (Dumont) G. Don)*					
scarified	60 lbs	1.4 lb	M-L P C		300,000 seed per pound. Height of growth is 18 to 24 inches. Advantageous in urban areas. Spreading-type growth. New growth has bronze coloration. Mix with weeping lovegrass, common bermuda, bahia, tall fescue or winter annuals. Do not mix with Sericea lespedeza. Slow to develop solid stands. Inoculate seed with EL inoculant.
unscarified	75 lbs	1.7 lb	M-L P C		
LESPEDEZA, SHRUB *Lespedeza bicolor* *Lespedeza thumbergii*					
plants	3' x3'		M-L P C		Provide wildlife food and cover.
LOVEGRASS, WEEPING *Eragrostis curvula*					
alone	4 lbs	0.1 lb	M-L		1,500,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
with other perennials	2 lbs	0.05 lb	P C		

Table 6-5.2- Permanent Cover Crops

PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER [1]

Species	Broadcast Rates Rate Per Acre²	Pure Live Seed (PLS) Per 1000 sqft	Resource Area³	Planting Dates by Resource Area Solid lines indicate optimum dates, dotted lines indicate permissible but marginal dates. J F M A M J J A S O N D	Remarks
MAIDENCANE *Panicum hemitomon*					
sprigs	2' x 3' spacing		ALL		For very wet sites. May clog channels. Dig sprigs from local sources. Use along river banks and shorelines.
PANICGRASS, ATLANTIC COASTAL *Panicum amarum var amarukum*	20 lbs	0.5 lb	P C		Grows well on coastal sand dunes, borrow areas, and gravel pits. Provides winter cover for wildlife. Mix with Sericea lespedeza except on sand dunes.
REED CANARY GRASS *Phalaris arundinacea*					
alone	50 lbs	1.1 lb	M-L		
with other perrenials	30 lbs	0.7 lb	P		Grows similar to Tall fescue
SUNFLOWER, 'AZTEC' MAXIMILLIAN *Helianthus maximiliani*	10 lbs	0.2 lb	M-L P C		227,000 seed per pound. Mix with Weeping lovegrass or other low-grwoing grasses or legumes.

1 Reduce seeding rates by 50% when drilled
2 PLS is an abbreviation for Pure Live Seed. Refer to Section V.E. of these specifications.
3 M-L represents to Mountain; Blue Ridge; and Ridges and Valleys MLRAs
P represents the Southern Piedmont MLRA
C represents the Souther Coastal Plain;Sand Hills;Black Lands;and Atlantic Coast Flatwoods MLRAs. See Figure 6-4.1

Table 6-5.3.

Durable Shrubs and Ground Covers for Permanent Cover

Ground covers include a wide range of low-growing plants planted together in considerable numbers to cover large areas of the landscape. Ground covers grow slower than grasses. Weeds are likely to compete, especially the first year. Maintenance is needed to insure survival. These ground covers will not be used unless proper maintenance is planned. Maintain mulch at three-inch thickness until plants provide adequate cover.

Fall planting is encouraged because the need for constant watering is reduced and plants have time to establish new roots before hot weather.

Common Name	Scientific Name	Mature Height	Plant Spacing	Comments
Albelia	Abelia grandiflora	3-4 ft.	5 ft.	Also a prostrate form 2 feet high. Sun, semi-shade. Semi-evergreen.
Carolina Yellow Jessamine	Gelsemium sempervirens	low	3 ft.	Vine. Yellow, trumpet-like flowers. Hardy, one of best vines. Evergreen. Native to Georgia.
Carpet Blue	Ajuga reptans	2-4 in.	3 ft.	Needs good drainage, partial shade. Blue or white flowers Evergreen.
Bearberry Cotoneaster	Cotoneaster dammeri	2-4 ft.	5 ft.	White flowers, red fruit. Sun. Evergreen.
Ground Cover Cotoneaster	Cotoneaster salicifoluis 'Repens'	1-2 ft.	5 ft.	White flowers, red fruit. Sun. Evergreen
Rock Cotoneaster	Cotoneaster horizontalis	1-2 ft.	5 ft.	Semi-evergreen. Sun.
Virginia Creeper	Parthenocissue quinquefolia	low	3 ft.	Red in fall. Vine. Deciduous. Native to Georgia.
Daylily	Hemerocallis spp.	2-3 ft.	2 ft.	Many flower colors. Full sun. Very hardy.
English Ivy	Hedera helix	low	3 ft.	Shade only. Climbs.
Compacta Holly	Ilex crenata 'Compacta'	3-4 ft.	5 ft.	Sun, semi-shade.
Chinese Holly	Ilex cornuta 'Rotunda'	3-4 ft.	5 ft.	Very durable. Sun, semi-shade.
Dwarf Burford Holly	Ilex burfordii 'Nana'	5-8 ft.	8 ft.	
Dwarf Yaupon Holly	Ilex vomitoria 'Nana'	3-4 ft.	5 ft.	Very durable, sun, semi-shade.

Table 6-5.3. Durable Shrubs and Ground Covers for Permanent Cover

Common Name	Scientific Name	Mature Height	Plant Spacing	Comments
Repandens Holly	Ilex crenata 'Repandens'	2-3 ft.	5 ft.	Sun, semi-shade.
Andorra Juniper	Juniperus horizontalis 'Plumosa'	2-3 ft.	5 ft.	Excellent for slopes. Sun.
Andorra Compacta Juniper	Juniperus horizontalis 'Plumosa compacta'	1-2 ft.	5 ft.	More compact than andora.
Blue Chip Juniper	Juniperus horizontalis 'Blue Chip'	8-10 in.	4 ft.	
Blue Rug Juniper	Juniperus horizontalis 'Wiltonii'	4-6 in.	3 ft.	Very low. Sun.
Parsons Juniper	Juniperus davurica 'Expansa' (Squamata Parsoni)	18-24 in.	5 ft.	One of the best, good winter cover.
Pfitzer Juniper	Juniperus chinensis 'Pfitzerana'	6-8 ft.	6 ft.	Needs room.
Prince of Wales Juniper	Juniperus horizontalis 'Prince of Wales'	8-10 in.	4 ft.	Feathery appearance.
Sargent Juniper	Juniperus chinensis 'Sargentii'	1-2 ft.	5 ft.	Full sun. Needs good drainage. Good winter color.
Shore Juniper	Juniperus conferta	2-3 ft.	5 ft.	Emerald Sea or Blue Pacific cultivars are good.
Liriope	Liriope muscari	8-10 in.	3 ft.	

Table 6-5.3. Durable Shrubs and Ground Covers for Permanent Cover

Common Name	Scientific Name	Mature Height	Plant Spacing	Comments
Creeping Liriope	Liriope spicata	10-12 in.	1 ft.	Spreads by runners.
Big Leaf Periwinkle	Vinca major	12-15 in.	4 ft.	Lilac flowers in spring. Semi-shade.
Common Periwinkle	Vinca minor	5-6 in.	4 ft.	Lavender-blue flowers in spring. Semi-shade
Cherokee Rose	Rosa laevigata	2 ft.	5 ft.	Rampant grower. Not for restricted spaces. State flower.
Memoria Rose	Rosa weuchuriana	2 ft.	5 ft.	Rampant grower.
St. Johnswort	Hypericum calycenum	8-12 in.	3 ft.	Semi-shade.
Anthony Waterer Spirea	Spirea bumalda	3-4 ft.	5 ft.	Sun.
Thunberg Spirea	Spirea thinbergii	3-4 ft.	5 ft.	Sun.

Table 6-5.4.

Trees for Erosion Control

SITE	SOIL MATERIAL	COMMON SOILS	PLANTING TREE SPECIES¹	SPACING	PLANTING DATES³
Borrow areas, graded areas, and spoil material	Sandy	Lakeland, Troup	Loblolly pine (Pinus taeda) Longleaf pine (Pinus palustris)	2	M-L,P 12/1-3/15 C 12/1-3/1
	Loamy	Orangeburg, Tifton	Loblolly pine Slash pine Loblolly pine	2	M-L,P 12/1-3/15 C 12/1-3/1
	Clay	Cecil, Faceville	Slash pine Virginia pine (Pinus virginiana)	2	M-L,P 12/1-3/15 C 12/1-3/1
Streambanks			Willows⁴ (Salix speciecs)	2 ft x 2 ft	ALL

[1] Other trees and shrubs listed on Table 6-25.3 may be interplanted with the pines for improved wildlife benefits.

[2]

Type of Planting	Tree Spacing	No. of Trees Per Acre
Trees alone	4 ft. x 4 ft.	2722
Trees in combination with grasses and/or other plants	6 ft. x 6 ft.	1210

[3] M-L represents the Mountains; Blue Ridge; and Ridges and Vallevs MLRAs
P represents the Southern Piedmont MLRA
C represents the Southern Coastal Plain; Sand Hills; Black Lands; and Atlantic Coast Flatwoods ML RAs (See Figure 6-4.1).

[4] Fertilization of companion crop is ample for this species.

Description of Storm Water Pollution Discharge Prevention Practices

1. THE FOLLOWING IS A DESCRIPTION OF THE PRACTICES TO BE USED BUT NOT LIMITED TO :
   - A. CONSTRUCTION EXIT
   - B. SILT FENCING
   - C. TEMPORY SEDIMENT BASINS
   - D. HAY BALE CHECK DAMS
   - E. STONE CHECK DAMS
   - F. STORM OUTLET PROTECTION
   - G. GRASSING
   - ~~H. DETENTION POND~~
   - ~~I. SKIMMER~~
   - J. DUST CONTROL
   - K. CONCRETE WASHDOWN PIT

LEVEL II
CERTIFICATION
NO. 2104
ISSUED 11-5-05
EXPIRES 11-15-26

SPECIAL CONSTRUCTION NOTE:

IF THE CONTRACTOR KNOWS OR CAN REASONABLY BE EXPECTED TO HAVE KNOWN OF AN ERROR, DISCREPANCY OR CONFLICT IN THE PLANS, SPECIFICATIONS OR CONSTRUCTION STAKING AND FAILS TO REPORT THE PROBLEM PRIOR TO CONSTRUCTION, HE SHALL NOT BE ENTITLED TO COMPENSATION FOR ANY WORK OR EXPENSE INCURRED BY HIM FOR WORK REQUIRED TO BE RE-CONSTRUCTED BECAUSE OF SAID ERROR, DISCREPANCY OR CONFLICT.

SCALE: 1" = 20'
0 20' 40' 50'

STREAM BUFFER ENCROACHMENT NOTES :

1. NEW STRUCTURES ON THIS PROJECT DO NOT ENCROACH IN THE 25 OR 50 FOOT STREAM BUFFER.
2. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

REVISIONS

BOSWELL DESIGN SERVICES, INC.
OFFICE : 4700 EAST HIGHWAY 80
Unit N, Suite 1
MAILING : 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 0932
LAHBOS@Bellsouth.net

DESIGNED	DRAWN	CHECKED
---	MAB	---

DATE : NOV. 26, 2024
JOB NO. ---
SCALE: as shown

SHOPPING CENTER DEVELOPMENT SITEWORK PLANS
0 OLD RICHMOND ROAD
PORT WENTWORTH, GA 31407
FOR
NISHANT RANDERWALA
PORT WENTWORTH, GA

SOIL EROSION AND SEDIMENT CONTROL NOTES

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING
UTILITIES PROTECTION CENTER
1-800-282-7411

MARK A. BOSWELL
No. 28372
11-26-24

Drawing Number
C-25
25 OF 28 SHEETS

DISTURBED AREA STABILIZATION (WITH SODDING) Ds4

DEFINITION

A permanent vegetative cover using sods on highly erodible or critically eroded lands.

PURPOSE

- Establish immediate ground cover.
- Reduce runoff and erosion.
- Improve aesthetics and land value.
- Reduce dust and sediments.
- Stabilize waterways, critical areas.
- Filter sediments, nutrients and bugs.
- Reduce downstream complaints.
- Reduce likelihood of legal action.
- Reduce likelihood of work stoppage due to legal action.
- Increase "good neighbor" benefits.

CONDITIONS

This application is appropriate for areas that require immediate vegetative covers, drop inlets, grass swales, and waterways with intermittent flow.

PLANNING CONSIDERATIONS

Sodding can initially be more costly than seeding, but the advantages justify the increased initial costs:

1. Immediate erosion control, green surface, and quick use.
2. Reduced failure as compared to seed as well as the lack of weeds.
3. Can be established nearly year-round.

Sodding is preferable to seed in waterways and swales because of the immediate protection of the channel after application. Sodding must be staked in concentrated flow areas (See Figure 6-6.1).

Consider using sod framed around drop inlets to reduce sediments and maintaining the grade.

CONSTRUCTION SPECIFICATIONS

Soil Preparation

Bring soil surface to final grade. Clear surface of trash, woody debris, stones and clods larger than 1". Apply sod to soil surfaces only and not frozen surfaces, or gravel type soils.

Topsoil properly applied will help guarantee a stand. Don't use topsoil recently treated with herbicides or soil sterilants.

Mix fertilizer into soil surface. Fertilize based on soil tests or Table 6-6.1.

Table 6-6.1. Fertilizer Requirements for Soil Surface Application

Fertilizer Type	Fertilizer Rate (lbs/acre)	Fertilizer Rate (lbs/sq ft)	Season
10-10-10	1000	.025	Fall

Agricultural lime should be applied based on soil tests or at a rate of 1 to 2 tons per acre.

Installation

Lay sod with tight joints and in straight lines. Don't overlap joints. Stagger joints and do not stretch sod (See Figure 6-6.2)

On slopes steeper than 3:1, sod should be anchored with pins or other approved methods. Installed sod should be rolled or tamped to provide good contact between sod and soil.

Irrigate sod and soil to a depth of 4" immediately after installation.

Sod should not be cut or spread in extremely wet or dry weather. Irrigation should be used to supplement rainfall for a minimum of 2-3 weeks.

MATERIALS

Sod selected should be certified. Sod grown in the general area of the project is desirable.

1. Sod should be machine cut and contain 3/4" (+ or -1/4") of soil, not including shoots or thatch.
2. Sod should be cut to the desired size within + or -5%. Torn or uneven pads should be rejected.
3. Sod should be cut and installed within 36 hours of digging.
4. Avoid planting when subject to frost heave or hot weather, if irrigation is not available.
5. The sod type should be shown on the plans or installed according to Table 6-6.2. See Figure 6-4.1 for your Resource Area.

MAINTENANCE

Re-sod areas where an adequate stand of sod is not obtained. New sod should be mowed sparingly. Grass height should not be cut less than 2"-3" or as specified (See Figure 6-6.2).

Apply one ton of agricultural lime as indicated by soil test or every 4-6 years. Fertilize grasses in accordance with soil tests or Table 6-6.3.

Table 6-6.2 Sod Planting Requirements

Grass	Varieties	Resource Area	Growing Season
Bermudagrass	Common Tifway Tifgreen Tiflawn	M-L,P,C P,C P,C P,C	warm weather
Bahiagrass	Pensacola	P,C	warm weather
Centipede	–	P,C	warm weather
St. Augustine	Common Bitterblue Raleigh	C	warm weather
Zoysia	Emerald Myer	P,C	warm weather
Tall Fescue	Kentucky	M-L,P	cool weather

Table 6-6.3 Fertilizer Requirements for Sod

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre)	Nitrogen Top Dressing Rate (lbs./acre)
cool season grasses	first second maintenance	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 - 30
warm season grasses	first second maintenance	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30

Description of Storm Water Pollution Discharge Prevention Practices

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   - C. TEMPORY SEDIMENT BASINS
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   - E. STONE CHECK DAMS
   - F. STORM OUTLET PROTECTION
   - G. GRASSING
   - ~~H. DETENTION POND~~
   - ~~I. SKIMMER~~
   - J. DUST CONTROL
   - K. CONCRETE WASHDOWN PIT

LEVEL II CERTIFICATION NO. 2104 ISSUED 11-5-05 EXPIRES 11-15-26

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SCALE: 1" = 20'

0 20' 40' 50'

REVISIONS

BOSWELL DESIGN SERVICES, INC.
OFFICE : 4700 EAST HIGHWAY 80
Unit N, Suite 1
MAILING : 103 NASSAU DRIVE
SAVANNAH, GEORGIA 31410
912 - 897 - 6932
LAHBOS@Bellsouth.net

DESIGNED --- DRAWN MAB CHECKED ---

DATE : NOV. 26, 2024

JOB NO. ---

SCALE: as shown

Shopping Center Development Sitework Plans
0 Old Richmond Road
Port Wentworth, GA 31407
For
Nishant Randerwala
Port Wentworth, GA

Soil Erosion And Sediment Control Notes

CONTACT A MINIMUM OF 72 HOURS PRIOR TO DIGGING

UTILITIES PROTECTION CENTER 1-800-282-7411

GEORGIA REGISTERED No. 28372 PROFESSIONAL ENGINEER 11-26-24 MARK A. BOSWELL

Drawing Number

C-26

26 of 28 sheets

BUILDING #2
for
COLDBROOK PLAZA
PORT WENTWORTH, GEORGIA

DESIGN TEAM

ARCHITECTURE

DPR ARCHITECTURE
12A EAST GRADY STREET
STATESBORO, GEORGIA 30458
912-764-6288
dprarch.com

ENGINEERING

SAUSSY ENGINEERING
400 JOHNNY MERCER BLVD, SUITE E
SAVANNAH, GA 31410
P:(912) 898-8255

PERSPECTIVE VIEW

1 ELEVATION
N. T. S.

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S2.1 ROOF FRAMING PLAN
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S5.2 SPECIFICATIONS

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SQUARE FOOTAGE

UNIT #1 –	2,175 SF
UNIT #2 –	2,190 SF
UNIT #3 –	2,190 SF
UNIT #4 –	2,175 SF
TOTAL–	8,730 SF

DPR ARCHITECTURE
D'ARCANGELO PALMER RULE

12A E. GRADY STREET
P.O. BOX 1382
912-764-6288

STATESBORO
GEORGIA 30458

www.dprarch.com

BUILDING #2
COLDBROOK PLAZA
OLD RICHMOND ROAD
PORT WENTWORTH, GA

CHECK SET

PROJECT NUMBER: 2367
PROJECT DATE: 10/1/24
DRAWN BY: AMG
APPROVED BY: TKP

SCHEDULE OF REVISIONS

#	DATE

TITLE SHEET

T1

STRUCTURAL NOTES

BASIS OF DESIGN:

A. GRAVITY LOADS	UNIFORM LOADS
1. ROOF DEAD LOADS:	21 PSF
2. ROOF LIVE LOADS:	20 PSF

B. SNOW LOADS (REFERENCE: ASCE 7-16)

GROUND SNOW LOAD, Pg =	5 PSF	(FIGURE 7.2-1)
Ce =	0.90 (TERRAIN CATEGORY C)	(TABLE 7.3-1)
Ct =	1.0	(TABLE 7.3-2)
I =	1.1 (BUILDING CAT. II)	(TABLE 7-4)

C. WIND LOADS (REFERENCE: ASCE 7-16)

BASIC WIND SPEED (3 SECOND GUST), V =	132 MPH	(FIGURE 26.5-1B)
NOMINAL WIND SPEED,	Vasd = 103 MPH	
RISK CATEGORY = II		(TABLE 1.5-1)
EXPOSURE CATEGORY = B		(SECTION 26.7)
INTERNAL PRESSURE COEFFICIENTS:	+0.18,-0.18	(TABLE 26.13-1)
(ENCLOSED BUILDING TYPE)		

THIS PROJECT IS NOT LOCATED IN A WIND-BORNE DEBRIS REGION.

D. SEISMIC LOADS (REFERENCE: ASCE 7-16)

RISK CATEGORY II		(TABLE 1.5-1)
0.2 SEC SPECTRAL RESPONSE ACCELERATION:	Ss = 0.315	
1.0 SEC SPECTRAL RESPONSE ACCELERATION:	S1 = 0.114	
SPECTRAL RESPONSE ACCELERATION:	Sds = 0.325	
SPECTRAL RESPONSE ACCELERATION:	Sd1 = 0.181	
SITE CLASSIFICATION = D (ASSUMED)		(SECTION 11.4)
BASIC SEISMIC-FORCE-RESISTING SYSTEM		
LONGITUDINAL:	SHEAR WALLS	
TRANSVERSE:	SHEAR WALLS	
SEISMIC DESIGN CATEGORY = C		(SECTION 11.6)
SEISMIC IMPORTANCE FACTOR = 1.00		(TABLE 1.5-2)
DESIGN BASE SHEAR, V =		(SECTION 12.8.1)
SEISMIC RESPONSE COEFFICIENT, Cs =		(SECTION 12.8.1.1)
RESPONSE MODIFICATION COEFFICIENT, R =		(TABLE 12.2.1)
ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE	(SECTION 12.8)

GENERAL:

1. DO NOT SCALE DRAWINGS. FOLLOW DIMENSIONS SHOWN ON PLAN OR OBTAIN ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN HEREIN WITH ARCHITECTURAL PLANS, SECTIONS, AND DETAILS PRIOR TO CONSTRUCTION OR MATERIAL PURCHASE. CONTRACTOR SHALL NOTIFY ARCHITECT IN WRITING OF ANY DISCREPANCIES NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND ELEVATIONS NOT SHOWN HEREIN.
3. WHERE DETAIL OR SECTION IS SHOWN FOR ONE CONDITION. IT SHALL APPLY TO ALL LIKE OR SIMILAR LOCATIONS.
4. CONTRACTORS SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF AND SHALL NOTIFY THE ARCHITECT IN WRITING PRIOR TO SUBMITTING BIDS.
5. REFERENCE TO STANDARD SPECIFICATIONS OF ANY TECHNICAL SOCIETY, ORGANIZATION, OR ASSOCIATION OR TO CODES OF LOCAL OR STATE AUTHORITIES, SHALL MEAN THE LATEST STANDARD, CODE, SPECIFICATION, OR TENTATIVE SPECIFICATION ADOPTED AT THE DATE OF TAKING BIDS, UNLESS SPECIFICALLY STATED OTHERWISE.
6. COORDINATE FLOOR SLAB LAYOUT WITH ARCHITECTURAL DRAWINGS FOR EXACT LIMITS AND DEPRESSIONS FOR AREAS TO RECEIVE ARCHITECTURAL FLOOR FINISHES COORDINATE FLOOR JOINTS AT DOORS WITH ARCHITECTURAL DOOR DETAILS. LIMITS SHOWN ON STRUCTURAL DRAWINGS ARE SCHEMATIC.
7. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND DETAILS OF ALL EXTERIOR WALKS, CANOPIES, RAMPS, RAMP WALLS, AND ENTRANCE SLABS NOT DETAILED HEREIN.
8. NO CHANGE IN SIZE OR DIMENSION OF ANY STRUCTURAL MEMBER SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD. NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD UNLESS SPECIFICALLY DETAILED ON THE CONTRACT DRAWINGS.
9. STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THE SHOP DRAWINGS AND CONSTRUCTION ACTIVITIES.
10. THE USE OF REPRODUCTIONS OF CONTRACT DRAWINGS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER, IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.
12. CONTRACTOR HAS THE SOLE RESPONSIBILITY FOR MEANS, METHODS, SAFETY, TECHNIQUES, SEQUENCES, AND PROCEDURES OF ALL CONSTRUCTION SHOWN HEREIN. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTIBILITY, ANALYSIS, AND ERECTION PROCEDURES, INCLUDING DESIGN AND ERECTION OF FALSE WORK, TEMPORARY BRACING, ETC. CONTRACTOR HAS THE SOLE RESPONSIBILITY TO COMPLY WITH ALL OSHA REGULATIONS.
13. THE STRUCTURE IS STABLE ONLY IN ITS COMPLETED FORM. TEMPORARY SUPPORTS REQUIRED FOR STABILITY DURING ALL INTERMEDIATE STAGES OF CONSTRUCTION SHALL BE DESIGNED, FURNISHED, AND INSTALLED BY THE CONTRACTOR.

FOUNDATIONS:

1. FOUNDATION DESIGN IS BASED ON AN ASSUMED MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS ENCOUNTERED IN THE FIELD DIFFERENT FROM THOSE ASSUMED OR DESIGNED.
2. ALLOWABLE BEARING PRESSURE SHALL BE VERIFIED BY FIELD TESTING IN ACCORDANCE WITH REQUIREMENTS OF THE PROJECT SPECIFICATIONS. IN THE ABSENCE OF SPECIFICATION REQUIREMENTS, A DYNAMIC CONE PENETROMETER TEST (ASTM STP-399) SHALL BE PROVIDED AT EACH COLUMN FOOTING EXCAVATION AND MAXIMUM 75' O.C. IN WALL FOOTINGS AND THICKENED SLABS TO VERIFY AVAILABILITY OF THE DESIGN PRESSURE INDICATED FOR A MINIMUM DEPTH OF FOUR FEET BELOW BOTTOM OF FOOTING EXCAVATIONS.
3. ALL FOOTINGS AND SLABS SHALL BEAR ON SUBGRADE COMPACTED TO A MINIMUM 95% ASTM D-1557 UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED IN PROJECT SPECIFICATIONS.
4. ALL WATER SOFTENED SOILS IN FOUNDATION EXCAVATIONS SHALL BE REMOVED PRIOR TO POURING CONCRETE. FILL OVER-EXCAVATED LIMITS WITH COMPACTED STRUCTURAL FILL OR ADDITIONAL CONCRETE.
5. ALL BOTTOM REINFORCING IN FOOTINGS AND THICKENED SLABS SHALL BE SUPPORTED WITH WHOLE CONCRETE BRICKS OR PREFABRICATED ALL PLASTIC CHAIR SUPPORT AT MAXIMUM 48" O.C. BAR SUPPORTS SHALL BE POSITIONED TO MAINTAIN NO LESS THAN 3" CLEAR TO BOTTOM OF LOWEST REINFORCING BAR.
6. ALL FOOTING, PIER AND OTHER FOUNDATION TYPE REINFORCING SHALL BE TIED IN PLACE PRIOR TO POURING CONCRETE.
7. PROVIDE 1/4" PREMOLDED EXPANSION JOINT FILLER AROUND PERIMETER OF SLABS WHERE THEY ABUT VERTICAL WALL SURFACES AND AT COLUMN ISOLATION JOINTS AS DETAILED. WHERE SLABS ARE EXPOSED TO VIEW, OMIT PEJ AND PROVIDE 30# BUILDING FELT BETWEEN VERTICAL SURFACES AND CONCRETE SLABS.
8. CONSTRUCTION JOINTS IN WALL FOOTINGS SHALL BE FORMED VERTICALLY WITH MINIMUM 2'-0" LAP HORIZONTAL REINFORCING.
9. ALL SLAB ON GRADE WIRE MESH SHALL BE PROVIDED IN FLAT SHEETS (NO ROLLS) AND SUPPORTED BY PREMANUFACTURED PLASTIC CHAIRS SPACED AT MAXIMUM 48" ON CENTER EACH WAY. PROVIDE CHAIRS MAXIMUM 8" FROM SLAB EDGES AND METAL KEY JOINTS. NO CONCRETE BRICKS ARE PERMITTED WITHIN SLABS.

CONCRETE:

1. UNLESS OTHERWISE SHOWN, THE CENTERLINES OF ALL PIERS AND COLUMN FOOTINGS SHALL BE LOCATED ON COLUMN CENTERLINES OVER.
2. UNLESS SPECIFIED OTHERWISE, CONCRETE COVER OVER REINFORCEMENT SHALL CONFORM TO THE FOLLOWING:
   - A. ALL FOOTINGS AND OTHER CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
   - B. FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:
     - #5 BAR AND SMALLER: 1 ½"
     - #6 BAR AND LARGER: 2"
   - C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
     - 1. SLABS, WALLS, JOISTS:
       - #11 BAR AND SMALLER: 3/4"
       - #14 AND #18 BARS: 1 ½"
     - 2. BEAMS, COLUMNS:
       - PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS: 1 ½"
3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE. REINFORCING INDICATED TO BE WELDED TO STRUCTURAL COMPONENTS SHALL MEET MATERIAL REQUIREMENTS OF ASTM A706.
4. PROVIDE DOWELS OF THE SAME SIZE AND NUMBER AS THE VERTICAL WALL AND COLUMN REINFORCING, UNLESS NOTED OTHERWISE.
5. REINFORCEMENT SHALL BE SPLICED ONLY AT LOCATIONS SHOWN OR NOTED ON THE STRUCTURAL DOCUMENTS, EXCEPT REINFORCING MARKED CONTINUOUS MAY BE SPLICED AT LOCATIONS DETERMINED BY THE CONTRACTOR. SPLICES AT OTHER LOCATIONS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
6. ALL CONCRETE WORK SHALL CONFORM TO ACI 318 AND CRSI STANDARDS.
7. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS, OR OTHER INSERTS REQUIRED TO BE ENCASED IN CONCRETE AND FOR EXACT LOCATIONS OF FLOOR FINISHES AND SLAB DEPRESSIONS.
8. CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. NO HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED EXCEPT THOSE SHOWN ON THE STRUCTURAL DRAWINGS.
9. DEFECTIVE AREAS IN CONCRETE WORK INCLUDING, BUT NOT LIMITED TO, HONEYCOMBING, SPALLS, AND CRACKS WITH WIDTHS EXCEEDING 0.10" SHALL BE REPAIRED BY THE CONTRACTOR. THE EXTENT OF THE DEFECTIVE AREA SHALL BE DETERMINED BY THE STRUCTURAL ENGINEER.
10. NO REINFORCING SHALL BE CUT IN FIELD. ADDITIONAL REINFORCING AND THAT QUANTITY OF REINFORCING OCCURRING AT OPENINGS SHALL BE PLACED EQUALLY EACH SIDE OF OPENING AS DETAILED.
11. HOOKS IN REINFORCING ARE IN ADDITION TO LENGTHS SHOWN.
12. UNLESS NOTED OTHERWISE, DETAILING AND FABRICATION OF REINFORCING STEEL SHALL FOLLOW ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING OF REINFORCED CONCRETE STRUCTURES" (ACI 315).

STEEL FRAMING:

1. ALL WIDE FLANGE STEEL SHAPES INCLUDING WT'S SHALL BE FABRICATED USING ASTM A992 GRADE 50 STRUCTURAL STEEL MATERIAL. ALL OTHER SHAPES, PLATES, BARS, ETC., SHALL BE ASTM A36 OR AS INDICATED IN SPECIFICATIONS.
2. ALL BOLTED CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER (MIN.) ASTM F3125-15 (120 KSI TENSILE STRENGTH, GRADE F1852) HIGH STRENGTH TWIST-OFF TYPE BOLTS UNLESS DETAILED OR APPROVED OTHERWISE BY ENGINEER.
3. STEEL FRAMING, INCLUDING BOLTED AND WELDED CONNECTIONS, BRACING, AND ANCHORAGES SHALL BE COMPLETE AND PLUMB PRIOR TO PLACEMENT OF DECKS.
4. TOP OF STEEL ELEVATIONS SHOWN ON FRAMING PLANS ARE MEASURED FROM FINISHED FIRST FLOOR UNLESS NOTED.
5. ALL STRUCTURAL STEEL CONSTRUCTION SHALL CONFORM TO "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS OF AISC 15TH EDITION.
6. ALL FABRICATIONS SHALL COMPLY WITH "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", LATEST EDITIONS, AS PUBLISHED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
7. THE STRUCTURAL DRAWINGS ARE NOT INTENDED TO REPRESENT ALL STEEL REQUIRED ON THIS PROJECT. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL MISCELLANEOUS STRUCTURAL STEEL FRAMING NOT SHOWN ON STRUCTURAL DRAWINGS INCLUDING MISCELLANEOUS ANGLE FRAMING, BRACING, ETC.
8. ALL STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED UNLESS OTHERWISE DIRECTED BY THE ARCHITECT. WHERE WELDING IS USED ON HOT-DIPPED GALVANIZED FRAMING MEMBERS, WELDS AND ADJACENT AREAS SHALL BE COATED WITH A COLD GALVANIZING COMPOUND. CONTRACTOR TO SUBMIT DATA SHEET OF MATERIAL TO BE USED FOR ARCHITECT'S REVIEW.
9. DO NOT FIELD CUT ANY STRUCTURAL STEEL WITHOUT PRIOR REVIEW AND ACCEPTANCE OF THE ARCHITECT/ENGINEER.
10. NO SHOP SPLICE OR OTHER CONNECTION WILL BE PERMITTED UNLESS THAT SPLICE OR CONNECTION IS SHOWN ON THE SHOP DRAWINGS AND REVIEWED BY THE ENGINEER.
11. AFTER ALL FIELD WELDING IS COMPLETED, WELDS SHALL BE CLEANED OF ALL WELDING SPOILS AND RE-PRIMED. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
12. WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS. PROOF OF CERTIFICATION FOR EACH WELDER PERFORMING FIELD WELDING SHALL BE AVAILABLE AT THE JOB SITE. ALL WELDERS SHALL HAVE BEEN CERTIFIED WITHIN THE PREVIOUS 12 MONTHS IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS.
13. ALL ANCHORS, THRU-BOLTS OR OTHER THREADED STUDS (INCLUDING WASHERS AND NUTS) USED TO CONNECT PRESSURE TREATED BLOCKING SHALL BE HOT-DIPPED GALVANIZED.

STEEL COLUMNS:

1. STEEL COLUMN BASES ARE DESIGNED AS "UN-RESTRAINED"; THEREFORE COLUMNS MUST BE KEPT BRACED UNTIL ALL HORIZONTAL FRAMING HAS BEEN INSTALLED.
2. COLUMN ANCHOR RODS SHALL BE INSTALLED AND TIED IN PLACE PRIOR TO POURING CONCRETE. ANCHOR RODS SHALL NOT BE REPAIRED, REPLACED, OR MODIFIED BY THE CONTRACTOR WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.

TIMBER FRAMING:

1. THE LOCATION, NUMBER, AND DIMENSIONS OF TIMBER FRAMING ARE DESIGNED TO SHOW GENERAL ARRANGEMENT ONLY. ACTUAL SPANS, SPACINGS, ETC., SHALL BE DETERMINED FROM THE ARCHITECTURAL DETAILS.
2. SEE ARCHITECTURAL PLANS AND DETAILS FOR EDGE, SECTIONS, HEADER AND LINTEL LOCATIONS AND ALL NON-STRUCTURAL FRAMING AND TRIM.
3. ALL TIMBER FRAMING MATERIAL SHALL BE SURFACE DRIED AND USED AT 19% MAXIMUM MOISTURE CONTENT.
4. ALL STUD AND WALL FRAMING SHALL BE SYP NO. 2 MATERIAL.
5. ALL JOIST, RAFTER AND MISCELLANEOUS FRAMING SHALL BE SYP NO. 2 GRADE OR BETTER.
6. ALL FRAMING EXPOSED TO THE WEATHER OR IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA SPECIFICATIONS.
7. ALL NAILING NOT OTHERWISE INDICATED SHALL BE IN ACCORDANCE WITH TABLE 2304.9.1 OF THE IBC 2018 BUILDING CODE.
8. PROVIDE HEADER BEAMS OF THE SAME SIZE AS JOISTS OR RAFTERS TO FRAME AROUND OPENINGS IN THE PLYWOOD DECK UNLESS DETAILED OTHERWISE.
9. BOLT HOLES SHALL BE CAREFULLY CENTERED AND DRILLED NOT MORE THAN 1/16" LARGER THAN THE BOLT DIAMETER. BOLTED CONNECTIONS SHALL BE SNUGGED TIGHT BUT NOT TO THE EXTENT OF CRUSHING WOOD UNDER WASHERS.
10. PREMANUFACTURED(MICRO-LAM OR PARALLAM) HEADERS AND BEAMS SHALL BE AS MANUFACTURED BY "TRUS-JOIST" CORPORATION OR APPROVED EQUAL. DO NOT CUT OR NOTCH MICRO-LAM OR PARALLAM MATERIAL WITHOUT THE ENGINEER'S APPROVAL.
11. PREFABRICATED METAL JOIST HANGERS, HURRICANE CLIPS, HOLD-DOWN ANCHORS, AND OTHER ACCESSORIES SHALL BE AS MANUFACTURED BY "SIMPSON STRONG-TIE COMPANY" OR APPROVED EQUAL. INSTALL ALL ACCESSORIES PER THE MANUFACTURER'S REQUIREMENTS. UNLESS OTHERWISE NOTED, ALL CONNECTORS SHALL BE HOT-DIPPED GALVANIZED (COATING G60).
12. HOLES AND NOTCHES DRILLED OR CUT INTO WOOD FRAMING SHALL NOT EXCEED REQUIREMENTS OF IBC 2018, SECTIONS 2308.8.2 AND 2308.9.10.
13. ALL PLATES, ANCHORS, NAILS, BOLTS, NUTS, WASHERS, AND OTHER MISCELLANEOUS FRAMING AND CONNECTION HARDWARE PERMANENTLY EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED.
14. ALL BOLTS SHALL CONFORM TO ASTM A307.
15. ALL ROOF DECKING SHALL BE 5/8" THICK APA RATED PLYWOOD. SECURE TO FRAMING PER SCHEDULE HEREIN OR AS SPECIFIED OTHERWISE.
16. WHERE MULTI-PLY TIMBER TRUSSES BEAR ON STUD WALLS, PROVIDE ADDITIONAL STUDS BELOW BEARING POINTS TO MATCH THE NUMBER OF PLYS ON TRUSS OVER. STUD GROUP SHALL BE ANCHORED TO GROUND FLOOR SLAB WITH A MINIMUM OF ONE SIMPSON PHD5 EACH SIDE OF STUD GROUP.

PRE-ENGINEERED TIMBER ROOF TRUSSES:

1. ALL TRUSSES SHALL BE DESIGNED, FABRICATED AND ERECTED TO SUPPORT THE MINIMUM LOADS LISTED IN THE DESIGN CRITERIA HEREIN. WIND LOADS COMPUTED BY TRUSS MANUFACTURER SHALL BE BASED ON ASCE 7-16 "COMPONENTS AND CLADDING" TYPE ANALYSIS ONLY.
2. AT EACH TRUSS BEARING LOCATION, PROVIDE GALVANIZED METAL HURRICANE CLIPS SELECTED FROM SCHEDULE HEREIN. CLIPS SELECTED SHALL BE BASED ON CALCULATED WIND UPLIFT REACTIONS INDICATED ON TRUSS MANUFACTURER SHOP DRAWINGS. SELECTED HURRICANE CLIPS SHALL BE INDICATED ON TRUSS SHOP DRAWING SUBMITTAL FOR EACH INDIVIDUAL TRUSS SUPPORT.
3. INSTALL TEMPORARY AND PERMANENT VERTICAL BRACING OR OTHER BRACES AS RECOMMENDED BY THE TRUSS MANUFACTURER AND/OR APPLICABLE REFERENCES. THE GUIDELINES SET FORTH BY THE TRUSS PLATE INSTITUTE PUBLICATION H1B-91, COMMENTARY AND RECOMMENDATIONS FOR HANDLING, INSTALLING, AND BRACING METAL PLATE CONNECT AT WOOD TRUSSES, SHALL BE THE MINIMUM REQUIREMENT.
4. SHOP DRAWINGS, CALCULATIONS, ETC., TO BE SUBMITTED FOR REVIEW. SHOP DRAWINGS SHALL PROVIDE ERECTION LAYOUT FOR TRUSSES, OUTRIGGERS, HEADERS, BRACING, ETC. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR LOCATIONS OF SUPPORTS.
5. CALCULATIONS AND DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA.
6. TRUSS WEB TO CHORD CONNECTIONS SHALL BE MADE WITH APPROVED GALVANIZED STEEL TRUSS CONNECTION PLATES MEETING ALL APPLICABLE REQUIREMENTS OF THE TRUSS PLATE INSTITUTE OF THE LATEST ADOPTION.
7. MAXIMUM TRUSS LIVE LOAD DEFLECTIONS SHALL NOT EXCEED L/240. TRUSS BRIDGING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND APPLICABLE REFERENCES NOTED HEREIN.
8. TRUSSES ARE NOT DESIGNED TO SUPPORT CONCENTRATED LOADS DUE TO ANY MECHANICAL ROOF-TOP UNITS OR OTHER SUSPENDED TYPE UNITS UNLESS SPECIFICALLY SHOWN ON CONTRACT DRAWINGS.
9. TRUSS SHOP DRAWINGS INCLUDING LATERAL BRACING DETAILS SHALL BE AVAILABLE ON THE JOBSITE DURING TIMES OF INSPECTION AND SHALL BEAR CLEAR INDICATION THAT THEY HAVE BEEN RECEIVED AND APPROVED BY THE PROJECT STRUCTURAL ENGINEER OF RECORD.
10. TRUSSES ARE TO BE STORED OFF THE GROUND IN A MANNER WHICH WILL NOT DAMAGE OR WARP THE TRUSSES PRIOR TO ERECTION.
11. FIELD REPAIR OF DAMAGED TRUSSES MUST BE APPROVED IN WRITING BASED ON FIELD REPAIR SKETCHES PREPARED BY THE TRUSS MANUFACTURER.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR BRACING OF ALL TRUSSES DURING CONSTRUCTION TO PREVENT RACKING AND/OR OTHER LATERAL MOVEMENT AS RECOMMENDED BY THE TRUSS MANUFACTURER SHOP DRAWING DETAILS AND APPLICABLE REFERENCES.
13. TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED, NOR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
14. WHERE SCISSOR TYPE TRUSSES ARE USED, REFER TO NOTES HEREIN FOR ADDITIONAL REQUIREMENTS.
15. ALL HARDWARE REQUIRED FOR CONNECTIONS BETWEEN PRE-ENGINEERED TRUSS COMPONENTS INCLUDING TRUSS TO TRUSS OR TRUSS TO TRUSS GIRDER CONNECTIONS SHALL BE DESIGNED AND SPECIFIED BY THE TRUSS MANUFACTURER.
16. TRUSSES SHALL BE DESIGNED SUCH THAT THE MINIMUM SPACING OF BOTTOM CHORD BRACES IS 6'-0" UNLESS A RIGID CEILING IS SHOWN ON ARCHITECTURAL DRAWINGS.
17. PROVIDE 2X FRAMING BETWEEN TRUSS TOP CHORDS AT ALL RIDGE/VALLEY LOCATIONS WHERE TRUSS MEMBER DOES NOT OCCUR.

DEFERRED SUBMITTALS:
THE FOLLOWING SUBMITTALS SHALL BE PROVIDED TO THE BUILDING DEPARTMENT IN ACCORDANCE WITH 2018 IBC, SECTION 107.3.4.1 AFTER BEING REVIEWED BY THE ARCHITECT/ENGINEERS:
PRE-ENGINEERED TIMBER ROOF TRUSSES

SPECIAL STRUCTURAL INSPECTIONS:

A. SPECIAL INSPECTIONS:
   1. SPECIAL STRUCTURAL TESTS AND INSPECTIONS SHALL BE PERFORMED ON THIS PROJECT IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17 OF THE IBC 2018 BUILDING CODE AND ALL GEORGIA STATE AMENDMENTS.
   2. SPECIAL STRUCTURAL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN AGENCY SELECTED BY THE OWNER WHO MEETS ALL OF THE REQUIREMENTS FOR APPROVAL INDICATED IN IBC 2018 SECTION 1704. SPECIAL INSPECTORS SHALL BE QUALIFIED PERSONS WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
   3. THE CONTRACTOR SHALL COORDINATE THE INSPECTION SERVICES IN ACCORDANCE WITH THE PROGRESS OF THE WORK. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO THE INSPECTOR TO ALLOW PROPER SCHEDULING OF PERSONNEL.
   4. THE COSTS OF THE SPECIAL INSPECTOR'S SERVICES SHALL BE PAID FOR BY THE OWNER. COSTS OF INSPECTION SERVICES WHICH ARE EXEMPTED UNDER CHAPTER 17 AND SPECIFIED IN THE PROJECT SPECIFICATIONS, SHALL BE PAID FOR BY THE OWNER.

B. REPORTS:
   1. SPECIAL INSPECTORS SHALL KEEP A RECORD OF ALL INSPECTIONS PERFORMED. COPIES OF ALL INSPECTIONS SHALL BE FURNISHED TO THE BUILDING OFFICIAL, THE ARCHITECT, AND THE EOR WITHIN 48 HOURS OF THE INSPECTION.
   2. REPORTS SHALL INDICATE THAT THE WORK WAS PERFORMED AND CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WORK WHICH DOES NOT CONFORM TO THE CONTRACT DOCUMENTS SHALL BE IDENTIFIED IN THE REPORT AND SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR.
   3. INTERIM REPORTS OF INSPECTIONS DOCUMENTING REQUIRED SPECIAL INSPECTIONS INCLUDING ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL, THE ARCHITECT, AND THE EOR PRIOR TO COMPLETION OF THE STRUCTURAL SYSTEMS BUT AT A FREQUENCY NOT TO EXCEED 60 DAYS.
      IF ITEMS IN THE SPECIAL INSPECTION SCHEDULE ARE NOT COMPLETED WHEN REQUIRED OR, IN THE OPINION OF THE SPECIAL INSPECTOR ARE FOUND TO BE NOT APPLICABLE, THE ENGINEER OF RECORD SHOULD BE NOTIFIED IMMEDIATELY TO DISCUSS/RESOLVE SAID ISSUES. **THE CONTRACTOR MUST NOT WAIT UNTIL ISSUANCE OF THE FINAL REPORT TO BRING THIS TO THE ATTENTION OF THE DESIGN PROFESSIONALS.**

C. REQUIRED SPECIAL INSPECTIONS:

IBC SECTION	DESCRIPTION OF WORK	SPECIAL INSPECTION REQUIRED YES	NO	REMARKS
1704.2.5	INSPECTION OF FABRICATORS	X		1
1705.2	STEEL CONSTRUCTION	X		2
1705.3	CONCRETE CONSTRUCTION	X		3
1705.4	MASONRY CONSTRUCTION		X	
1705.5	WOOD CONSTRUCTION		X	
1705.6	SOILS	X		4
1705.7	DRIVEN DEEP FOUNDATION		X	
1705.8	CAST-IN-PLACE DEEP FOUNDATIONS		X	
1705.9	HELICAL PILE FOUNDATIONS		X	
1705.10	FABRICATED ITEMS		X	
1705.11	WIND RESISTANCE		X	
1705.12	SEISMIC RESISTANCE		X	
1705.13	TESTING AND QUALIFICATIONS FOR SEISMIC RESISTANCE		X	
1705.14	SPRAYED FIRE-RESISTANT MATERIALS		X	
1705.15	MASTIC AND INTUMESCENT COATINGS		X	
1705.16	EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)		X	

REMARKS:
1. WHERE FABRICATION OF STRUCTURAL LOAD BEARING ELEMENTS (I.E. JOISTS) ARE BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS ARE REQUIRED.
2. STEEL SPECIAL INSPECTION:
   CONTINUOUS AND PERIODIC INSPECTIONS, AS DEFINED BY SECTION 202 OF THE IBC 2018 BUILDING CODE, SHALL BE PERFORMED BY THE SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1705.2,QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360 AND TABLE 1705.2.3.
3. CONCRETE SPECIAL INSPECTION:
   CONTINUOUS AND PERIODIC INSPECTIONS, AS DEFINED BY SECTION 202 OF THE IBC 2018 BUILDING CODE, SHALL BE PERFORMED BY THE SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1705.3 AND TABLE 1705.3.
4. SOILS SPECIAL INSPECTION:
   INSPECTION OF THE EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT AND LOAD BEARING REQUIREMENTS SHALL BE PERFORMED BY THE SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1705.6 AND TABLE 1705.6.

STRUCTURAL LEGEND

SYMBOLS

— — —	FOOTING
▥	UNREINFORCED CONCRETE MASONRY
▩	REINFORCED CONCRETE MASONRY
▒	CONCRETE
▦	BOND BEAM
■ P2, ▛ P3	REINF. MASONRY PIERS
▨	DROP SLAB TO RECEIVE FLOOR FINISH
▩	THICKENED SLAB
FJ	FLOOR JOINT
WFJ	WALL FLOOR JOINT
SJ	SAWN JOINT
TJ	1" DEEP TOOLED JOINT
——×	CONCRETE SLAB TURNDOWN
S → 2"	SLOPE (DIRECTION AND DROP)
—◓	VERTICAL STEP IN WALL FOOTING
T.O.S. 12'-6"	TOP OF STEEL ELEVATION
(96.50)	TOP OF FOOTING ELEVATION
R	ADD #4x4'-0" IN CENTERLINE OF SLAB
HSB	HIGH STRENGTH BOLT
S	JOIST BOTTOM CHORD STRUT
●	ROOF DRAIN
⊠	FRAME AROUND ROOF DECK OPENING
⊢◀—	BEAM TO COLUMN MOMENT CONNECTION

ABBREVIATIONS

W/	WITH
DBL.	DOUBLE
BOT.	BOTTOM
DJ	DOUBLE JOIST
SIM	SIMILAR
T/O	THROUGHOUT
U.N.	UNLESS NOTED
P.E.J.	PRE-MOLDED EXPANSION JOINT
GA.	GAUGE
E.W.	EACH WAY
O.C.	ON CENTER
CL	CLEARANCE
FD	FLOOR DRAIN
A.F.F.	AT FINISHED FLOOR
LLV	LONG LEG VERTICAL
SLV	SHORT LEG VERTICAL
EJ	EXPANSION JOINT
MBM	METAL BUILDING MANUFACTURER
MBP	METAL BUILDING PURLINS
O.H.	OPPOSITE HAND
PB	PARALAM BEAM
ML	MICROLAM BEAM
RS	ROUGH SAWN
P.T.	PRESSURE TREATED
P.E.	PRE-ENGINEERED

STRUCTURAL SHEET INDEX

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S0.2 WIND PRESSURE SCHEDULES
S1.1 FOUNDATION PLAN
S2.1 ROOF FRAMING PLAN
S4.1 TYPICAL DETAILS
S5.1 SPECIFICATIONS
S5.2 SPECIFICATIONS

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PROJECT # 24034 - S0-1.dwg 9/18/24 11:35 am

DPR
ARCHITECTURE
D'ARCANGELO PALMER RULE

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No. 000432
W. HUNTER SAUSSY, III
Not Valid Unless Signed

BUILDING #2
COLDBROOK PLAZA
OLD RICHMOND ROAD
PORT WENTWORTH, GA

BID

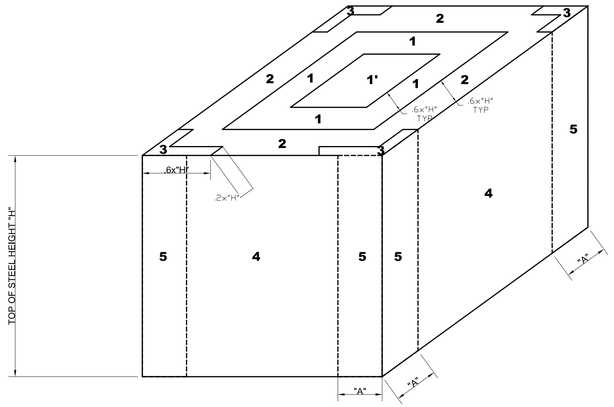
PROJECT NUMBER: 2367
PROJECT DATE: 10/01/24
DRAWN BY: H. Saussy III
APPROVED BY: H. Saussy III

SCHEDULE OF REVISIONS

#	DATE

STRUCTURAL NOTES

S0.1



COMPONENTS AND CLADDING - WALLS

qh 26.5 psf

ZONE	At (sqft)	GCpf+	gCpf-	MAX + (psf)	MIN - (psf)
4	10	0.90	-0.99	28.6	-31.0
4	20	0.84	-0.95	27.0	-29.8
4	50	0.78	-0.88	25.5	-28.1
4	100	0.75	-0.84	24.6	-27.0
4	200	0.69	-0.78	23.1	-25.5
4	500	0.63	-0.72	21.5	-23.9
4	1000	0.63	-0.72	21.5	-23.9
5	10	0.90	-1.26	28.6	-38.2
5	20	0.84	-1.15	27.0	-35.3
5	50	0.78	-1.04	25.5	-32.2
5	100	0.75	-0.96	24.6	-30.3
5	200	0.69	-0.84	23.1	-27.0
5	500	0.63	-0.72	21.5	-23.9
5	1000	0.63	-0.72	21.5	-23.9

COMPONENTS AND CLADDING - ROOF

qh 26.5 psf

ZONE	At (sqft)	GCpf+	gCpf-	GCpf- Overhang	MAX + (psf)	MIN - (psf)	Overhang (psf)
1'	10	0.30	-0.90	-1.70	16.0	-28.6	-49.8
1'	20	0.28	-0.90	-1.65	16.0	-28.6	-48.5
1'	50	0.23	-0.90	-1.63	16.0	-28.6	-47.8
1'	100	0.20	-0.90	-1.60	16.0	-28.6	-47.2
1'	200	0.20	-0.75	-1.30	16.0	-24.6	-39.2
1'	500	0.20	-0.55	-1.00	16.0	-19.3	-31.3
1'	1000	0.20	-0.40	-1.00	16.0	-16.0	-31.3
1	10	0.30	-1.70	-1.70	16.0	-49.8	-49.8
1	20	0.28	-1.60	-1.65	16.0	-47.2	-48.5
1	50	0.23	-1.40	-1.63	16.0	-41.9	-47.8
1	100	0.20	-1.30	-1.60	16.0	-39.2	-47.2
1	200	0.20	-1.20	-1.35	16.0	-36.6	-40.5
1	500	0.20	-1.00	-1.00	16.0	-31.3	-31.3
1	1000	0.20	-1.00	-1.00	16.0	-31.3	-31.3
2	10	0.90	-2.30	-2.30	28.6	-65.7	-65.7
2	20	0.84	-2.15	-2.10	27.0	-61.7	-60.4
2	50	0.78	-1.95	-1.80	25.5	-56.4	-52.5
2	100	0.75	-1.80	-1.60	24.6	-52.5	-47.2
2	200	0.69	-1.60	-1.40	23.1	-47.2	-41.9
2	500	0.63	-1.40	-1.10	21.5	-41.9	-33.9
2	1000	0.63	-1.40	-1.10	21.5	-41.9	-33.9
3	10	0.90	-2.30	-2.30	28.6	-65.7	-65.7
3	20	0.84	-2.15	-2.10	27.0	-61.7	-60.4
3	50	0.78	-1.95	-1.80	25.5	-56.4	-52.5
3	100	0.75	-1.80	-1.60	24.6	-52.5	-47.2
3	200	0.69	-1.60	-1.40	23.1	-47.2	-41.9
3	500	0.63	-1.40	-1.10	21.5	-41.9	-33.9
3	1000	0.63	-1.40	-1.10	21.5	-41.9	-33.9

COMPONENTS AND CLADDING ROOF AND WALL PRESSURES

NOTES:

1. ALL WIND LOADING SHOWN HEREIN ARE UNFACTORED BASED ON ASCE-7-16 BASIC WIND SPEED (3 SECOND GUST) WHICH IS EQUIVALENT TO IBC ULTIMATE DESIGN WIND SPEED.
2. FOR STRENGTH DESIGN, USE WIND PRESSURES IN THE FOLLOWING COMBINATIONS:
   - 1.2D + 1.6Lr +0.5W
   - 1.2D + 1.0W + 0.5Lr
   - 0.9D + 1.0W
3. FOR ALLOWABLE STRESS DESIGN, USE WIND PRESSURES IN THE FOLLOWING COMBINATIONS:
   - D + 0.6W
   - D+ 0.45W + 0.75Lr
   - 0.6D + 0.6W
   - D = DEAD LOAD
   - Lr = ROOF LIVE LOAD
   - W = WIND LOAD
4. OPTIONALLY, COMPONENTS AND CLADDING MANUFACTURES MAY CALCULATE WIND PRESSURES AND GEOMETRY FOR ALL ZONES USING APPLICABLE PROCEDURES IN ASCE7-16. ALL DESIGNS SHALL BE COMPLETED USING THE LOAD COMBINATIONS IN CHAPTER 2 OF ASCE 7-16 AND CHAPTER 16 OF IBC.

GEOMETRY

WIDTH(FT)	61
LENGTH (FT)	151
A (FT)	6.1
0.6H (FT)	10.8
0.2H (FT)	3.6

COMPONENTS AND CLADDING - COMBINED WINDWARD AND LEEWARD PARAPET

qzp 26.5 psf

ZONE	At (sqft)	GCpf+	gCpf-	MAX + (psf)	MIN - (psf)
4	10	3.20	-1.89	84.8	-50.1
4	20	2.99	-1.78	79.2	-47.2
4	50	2.73	-1.67	72.4	-44.1
4	100	2.55	-1.58	67.5	-42
4	200	2.29	-1.48	60.8	-39.1
4	500	2.03	-1.35	53.8	-35.8
4	1000	2.03	-1.35	53.8	-35.8
5	10	3.20	-2.16	84.8	-57.2
5	20	2.99	-1.99	79.2	-52.7
5	50	2.73	-1.82	72.4	-48.2
5	100	2.55	-1.71	67.5	-45.3
5	200	2.29	-1.53	60.8	-40.5
5	500	2.03	-1.35	53.8	-35.8
5	1000	2.03	-1.35	53.8	-35.8

MONOSLOPE ROOF SURFACE PRESSURES

DPR ARCHITECTURE
D'ARCANGELO PALMER RULE

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BUILDING #2
COLDBROOK PLAZA
OLD RICHMOND ROAD
PORT WENTWORTH, GA

BID

PROJECT NUMBER: 2367
PROJECT DATE: 10/01/24
DRAWN BY: H. Saussy III
APPROVED BY: H. Saussy III

SCHEDULE OF REVISIONS

#	DATE

WIND PRESSURE SCHEDULES

S0.2

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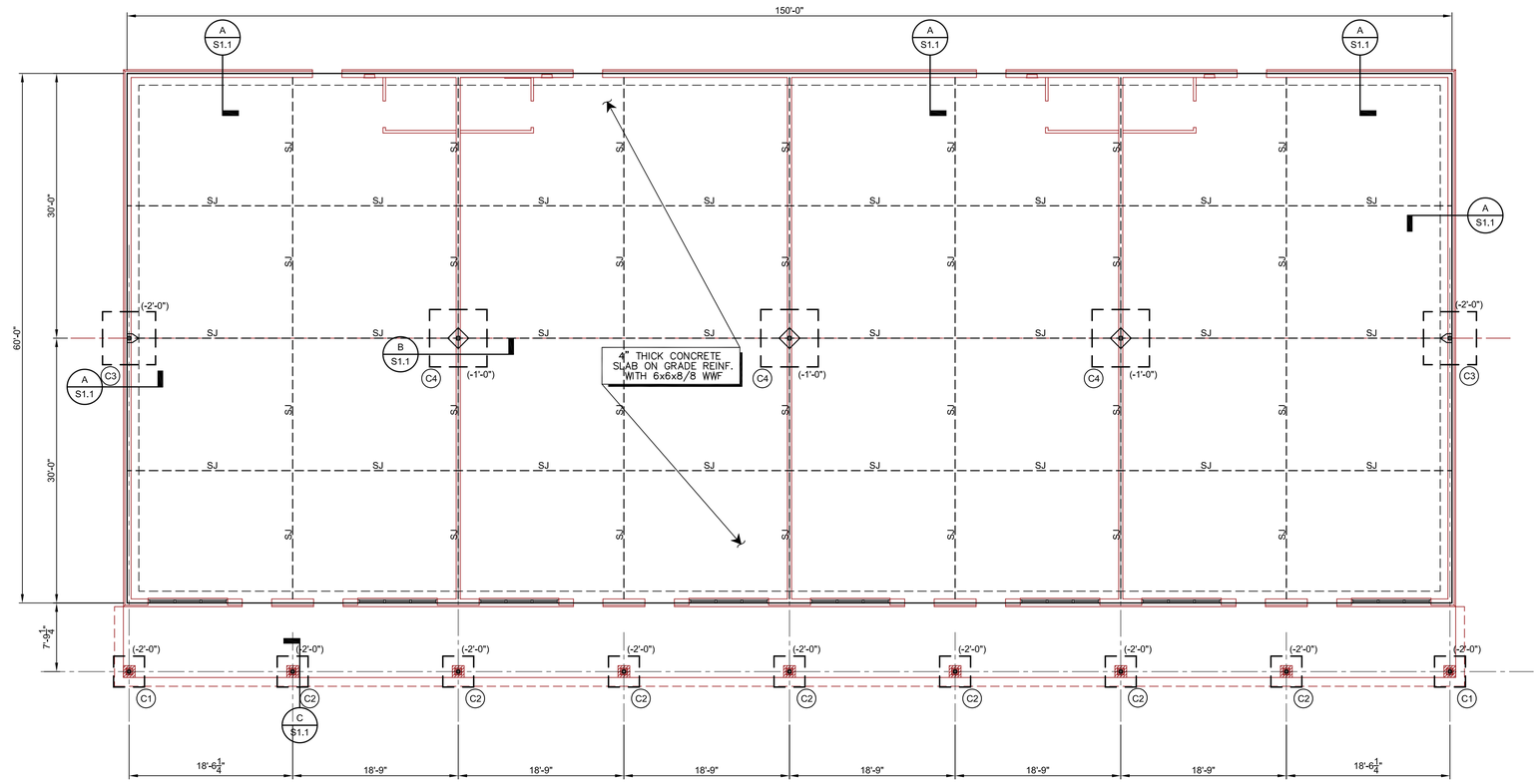
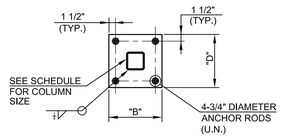


FOUNDATION PLAN

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

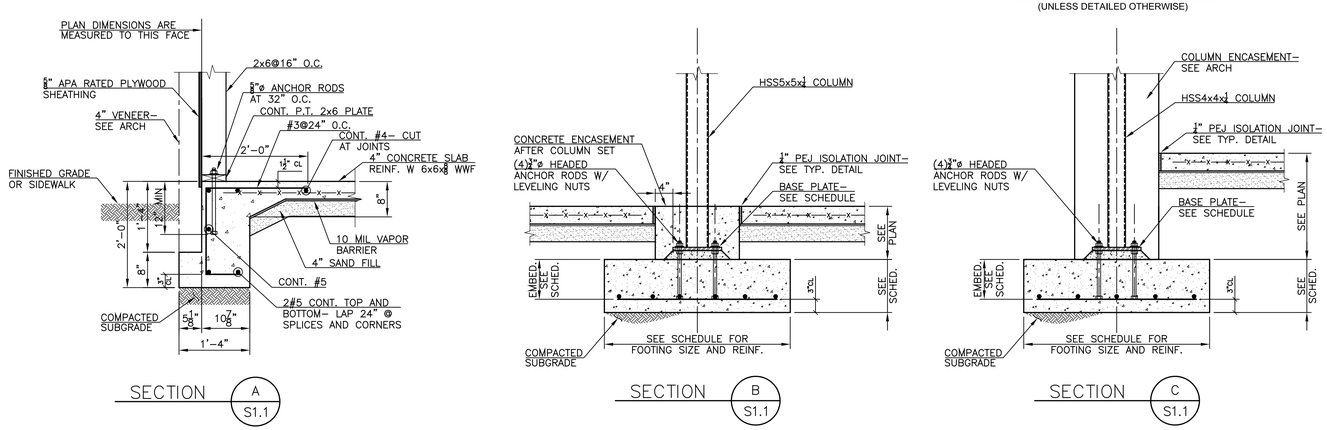
COLUMN AND FOUNDATION SCHEDULE

MARK	COLUMN			FOOTING				ANCHOR RODS			NOTES
	LOADS (KIPS)	SIZE	BASE PLATE	SIZE	DEPTH	REINF. E.W.	REINF. TOP/BOT?	No.	DIAM.	EMBEDMENT LENGTH	
C1	2	HSS4x4x1/4	10"x5/8"x10"	3'-6"x3'-6"	12"	5#4	NO	4	3/4"Ø	9"	
C2	4	HSS4x4x1/4	10"x5/8"x10"	3'-6"x3'-6"	12"	5#4	NO	4	3/4"Ø	9"	
C3	24	HSS5x5x1/4	11"x3/4"x11"	6'-0"x6'-0"	12"	7#5	NO	4	3/4"Ø	9	
C4	48	HSS5x5x1/4	11"x3/4"x11"	6'-6"x6'-6"	14"	7#5	YES	4	3/4"Ø	10"	



TYPICAL COLUMN BASE PLATE DETAIL

(UNLESS DETAILED OTHERWISE)



DPR ARCHITECTURE
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BID

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APPROVED BY: H. Saussy III

SCHEDULE OF REVISIONS

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FOUNDATION PLAN

S1.1

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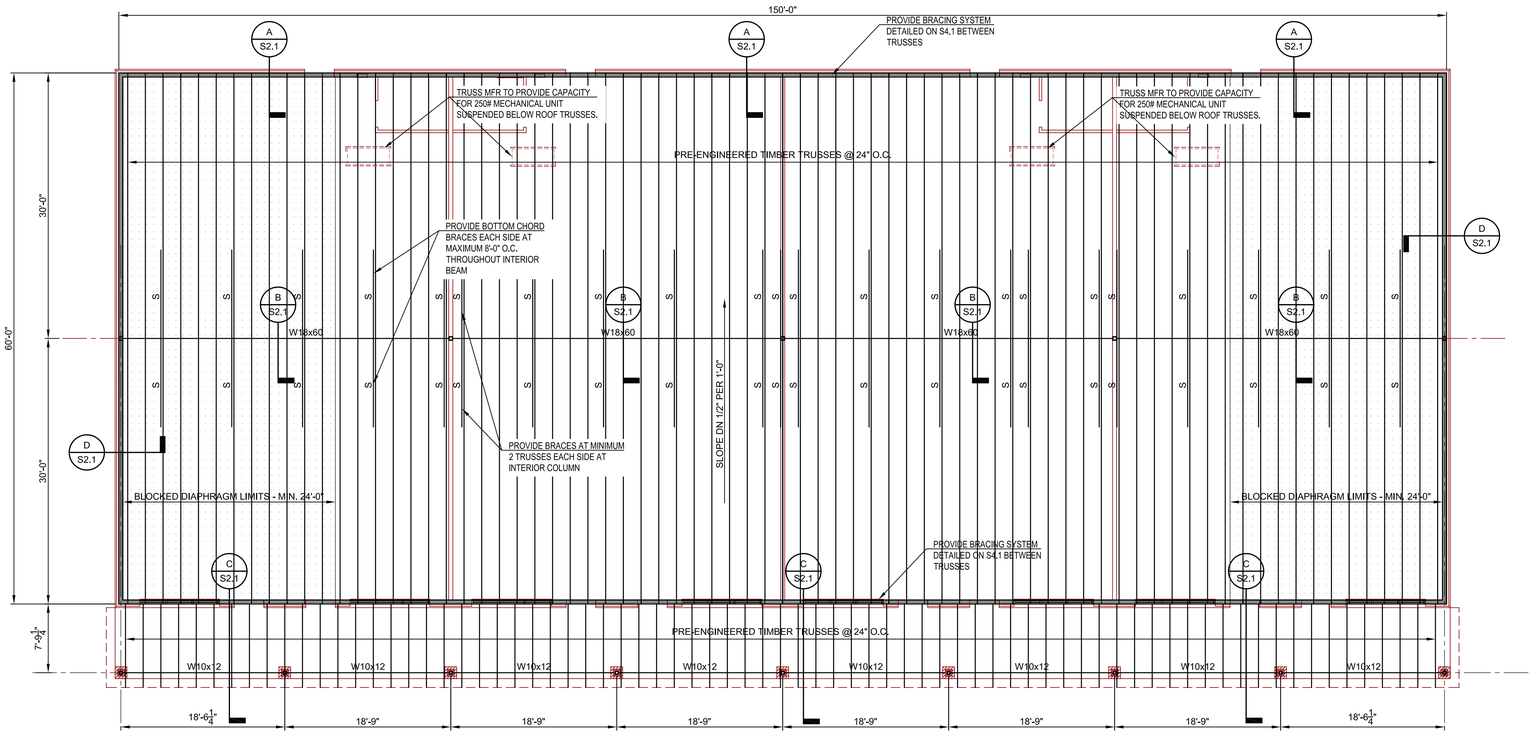
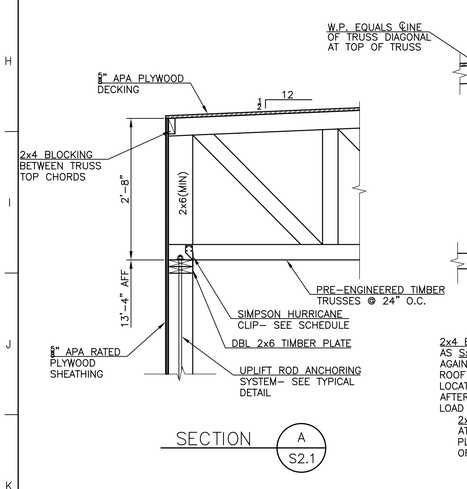
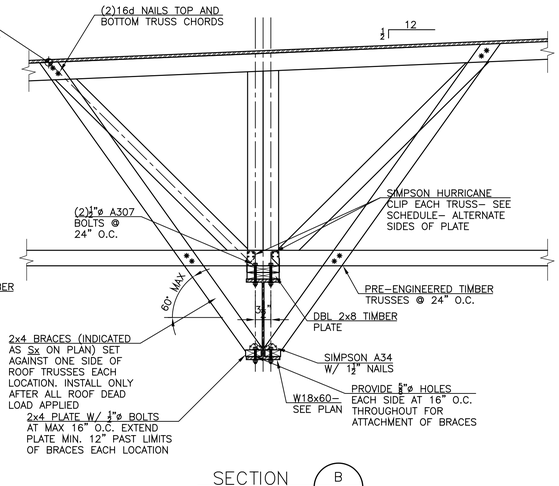


ROOF FRAMING PLAN

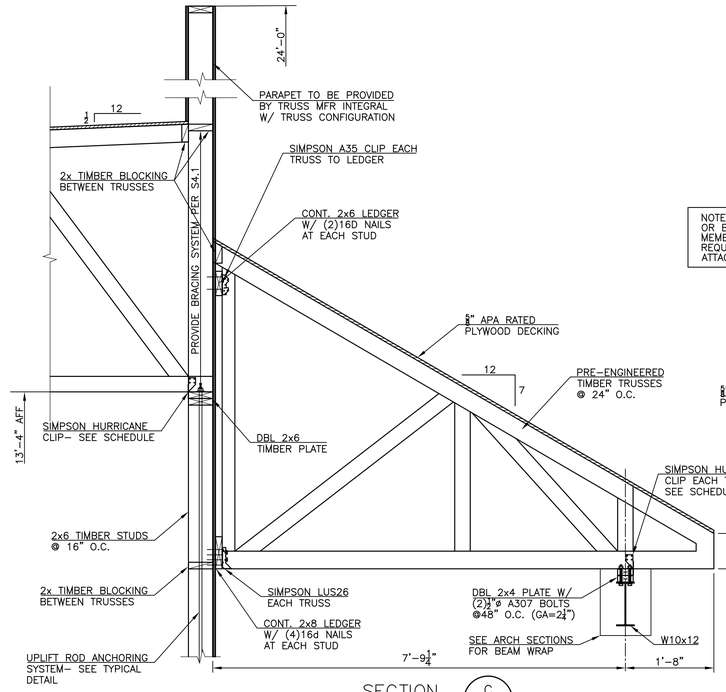
SCALE: 1/8"=1'-0"



SECTION A S2.1

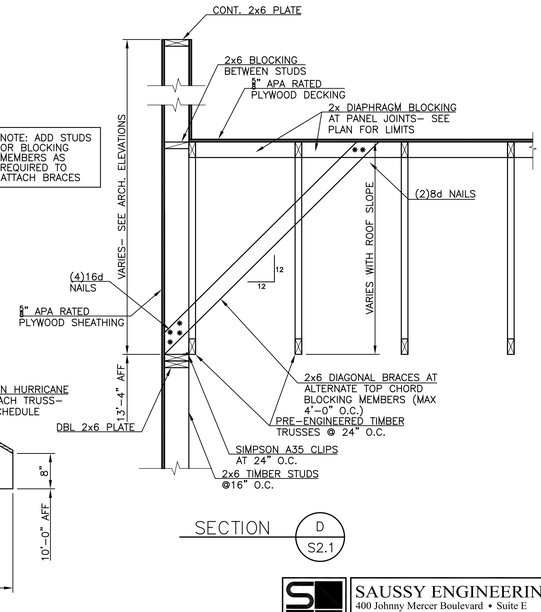


SECTION B S2.1



SECTION C S2.1

NOTE: ADD STUDS OR BLOCKING MEMBERS AS REQUIRED TO ATTACH BRACES



SECTION D S2.1

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BID

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DRAWN BY: H. Saussy III
APPROVED BY: H. Saussy III

SCHEDULE OF REVISIONS

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ROOF FRAMING PLAN

S2.1

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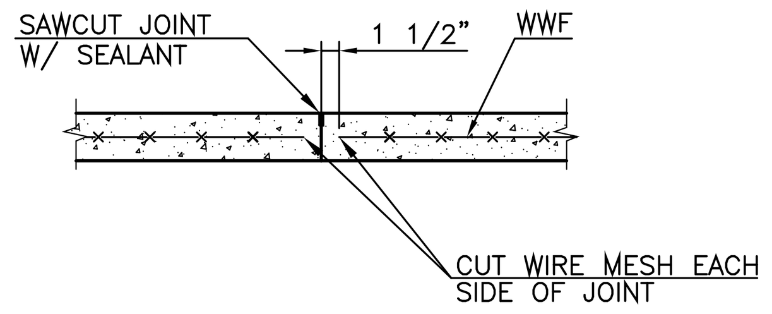


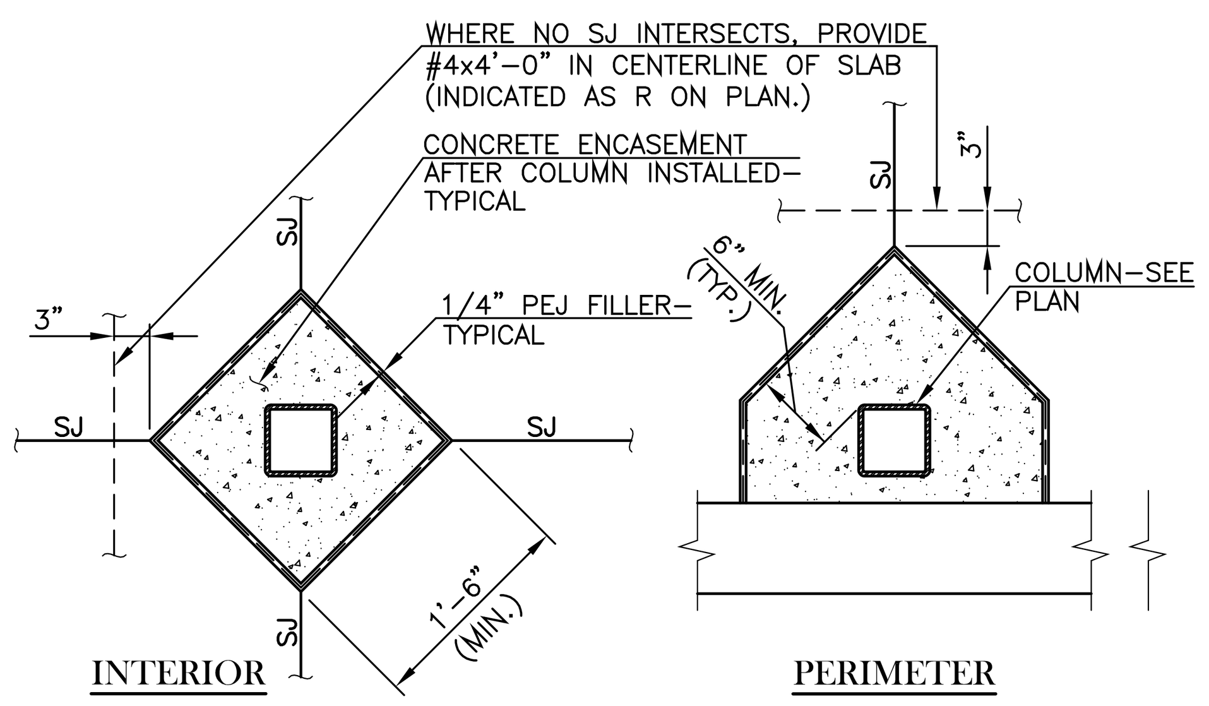
TYPICAL SAWN JOINT DETAIL

(INDICATED AS __SJ___ON PLANS)

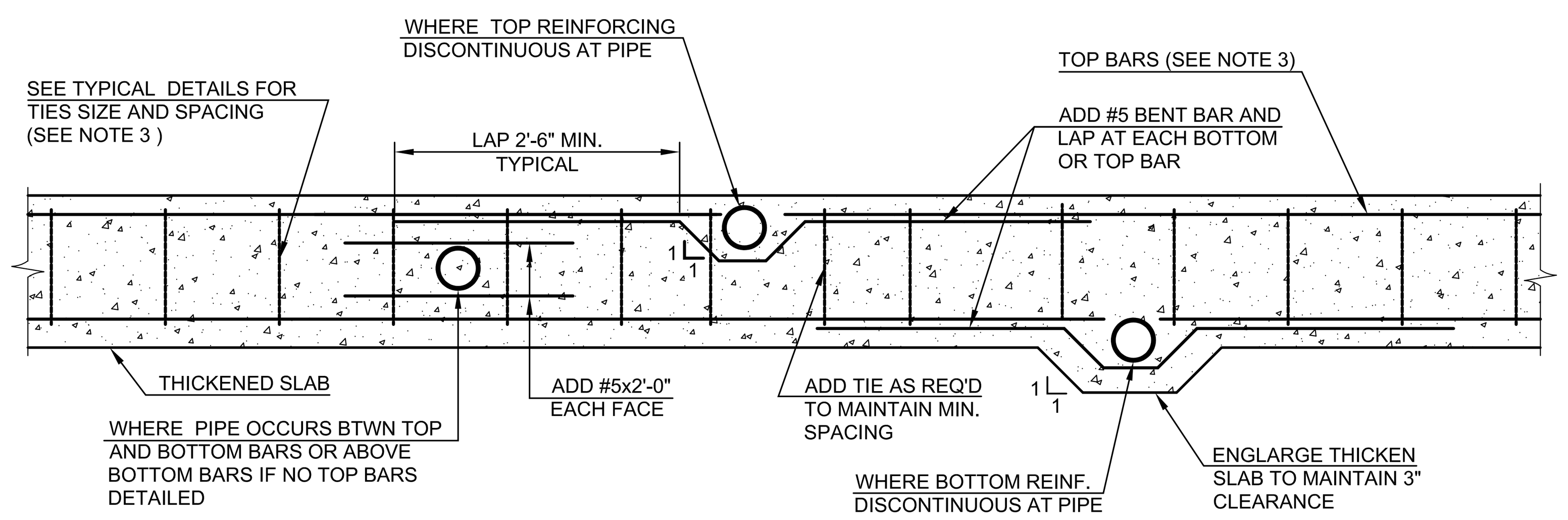
SAWN JOINT CONSTRUCTION

SAWN JOINTS, SHALL BE CONSTRUCTED AS FOLLOWS:

1. SAWN JOINTS SHALL ONLY OCCUR AT DESIGNATED LOCATIONS WHERE SHOWN ON FOUNDATION PLAN.
2. JOINT DEPTHS SHALL BE A MINIMUM OF 1/4 OF THE SLAB DEPTH BUT NOT LESS THAN 1".
3. JOINTS SHALL BE SAWN AS SOON AS CONCRETE IS HARD ENOUGH TO SUPPORT THE WEIGHT OF THE EQUIPMENT TO BE USED WITHOUT RAVELING THE CONCRETE SURFACE BUT NO LATER THAN 12 HOURS AFTER POURING OF SLAB.
4. A CONSTRUCTION JOINT, FORMED USING A PREFORMED METAL KEY JOINT, MAY BE SUBSTITUTED FOR A SAWN JOINT AT THE CONTRACTOR'S OPTION.

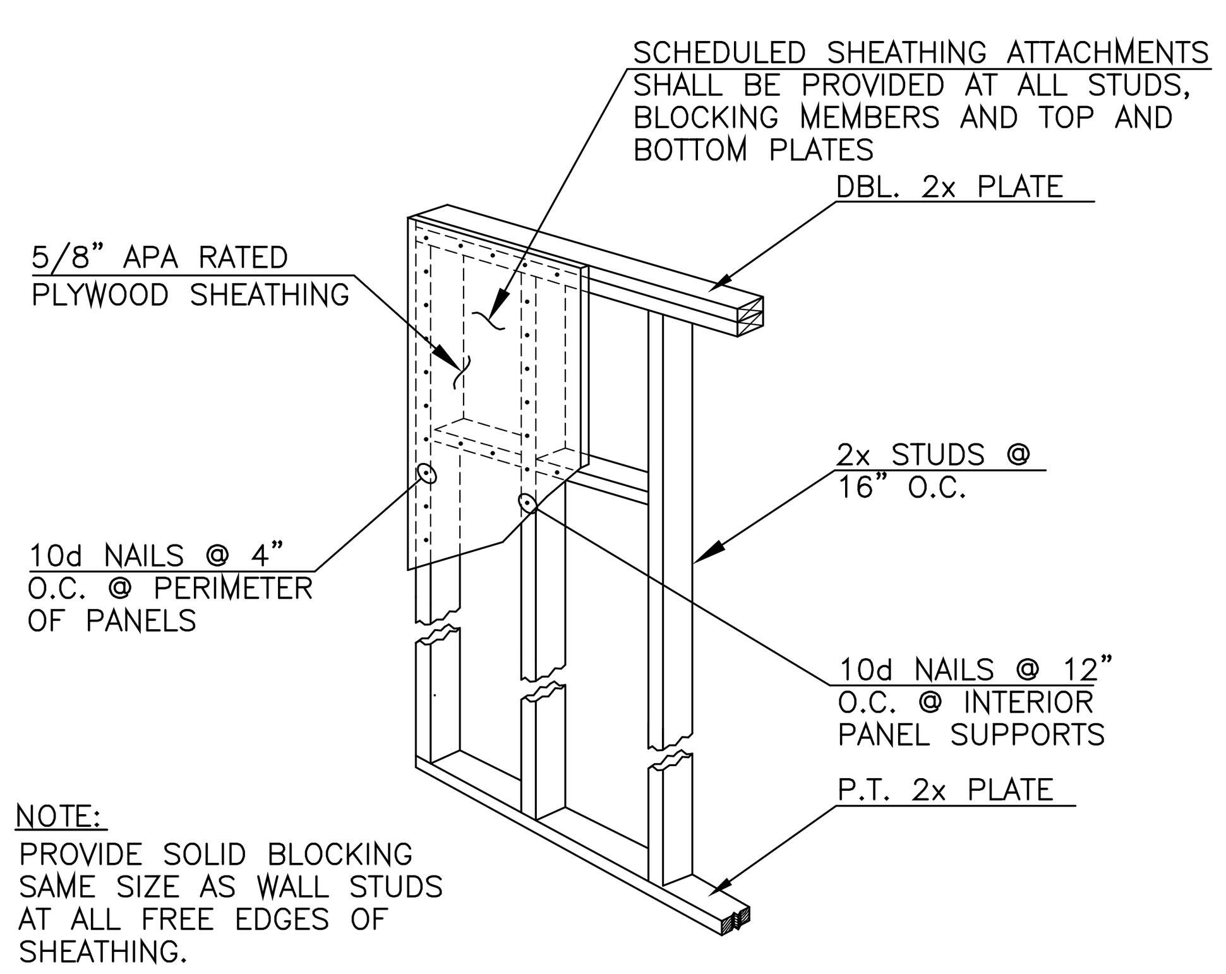


TYP. COLUMN ISOLATION JOINT DETAIL @ CONCRETE SLABS



DETAIL AT PIPE PENETRATIONS THICKENED SLAB

NOTES:
1. CONTRACTOR SHALL COORDINATE AND IDENTIFY ALL PIPE LOCATIONS PRIOR TO POURING THICKENED SLABS AND MAKE NECESSARY ADJUSTMENTS AS DETAILED.
2. PROVIDE PIPE SLEEVES AT ALL PIPE PENETRATIONS.
3. WHERE THICKENED SLAB SCHEDULED WITHOUT TOP BARS AND TIES, NO ADDITIONAL TIES OR TOP BARS REQUIRED WHERE PIPE PENETRATES OCCUR ABOVE BOTTOM BARS. ADD #5x2'-0" TOP AND BOTTOM & EACH FACE OF PENETRATION.

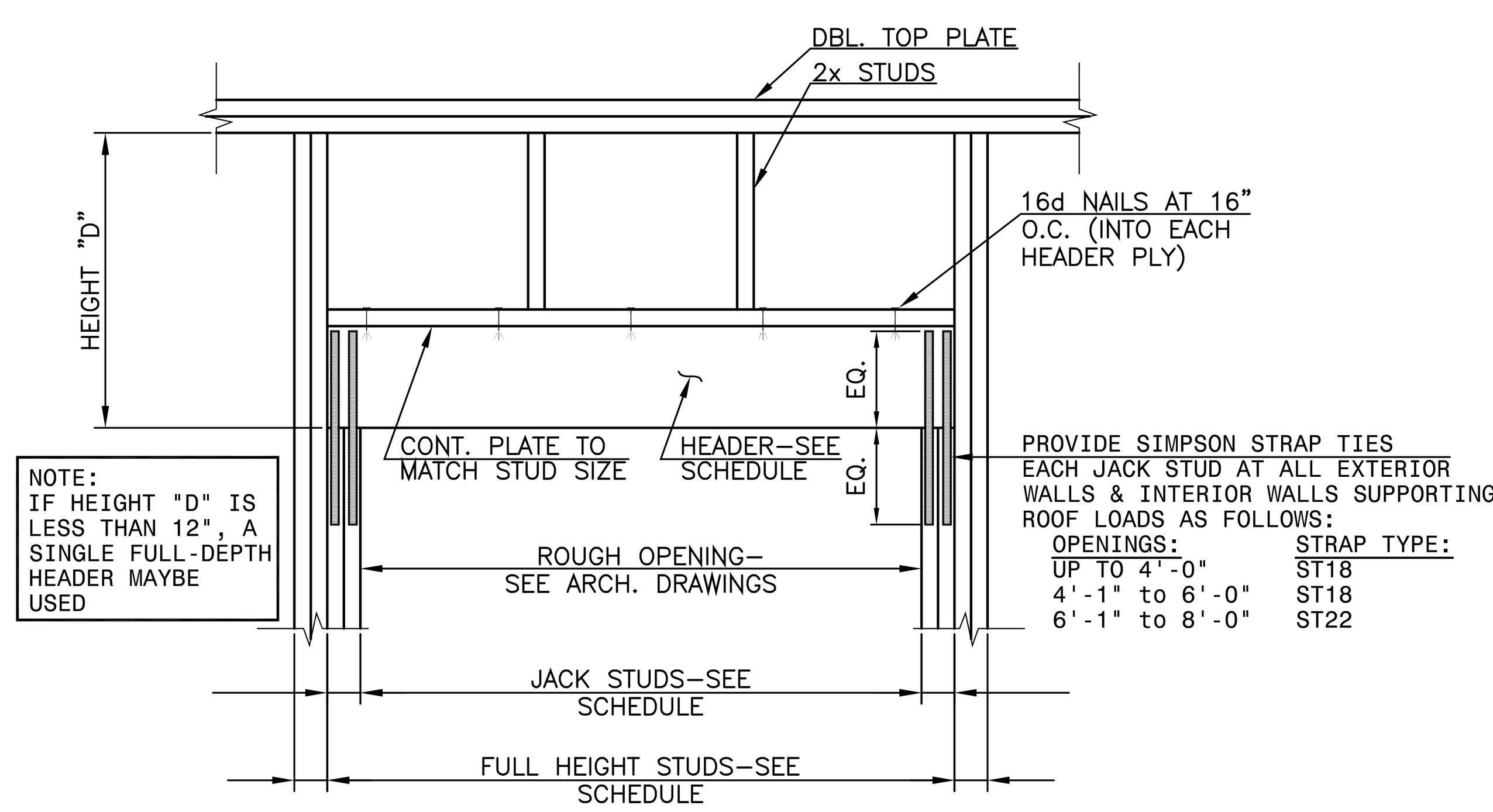


NOTE:
PROVIDE SOLID BLOCKING SAME SIZE AS WALL STUDS AT ALL FREE EDGES OF SHEATHING.

SCHEMATIC EXTERIOR WALL ELEVATION

HEADER SCHEDULE

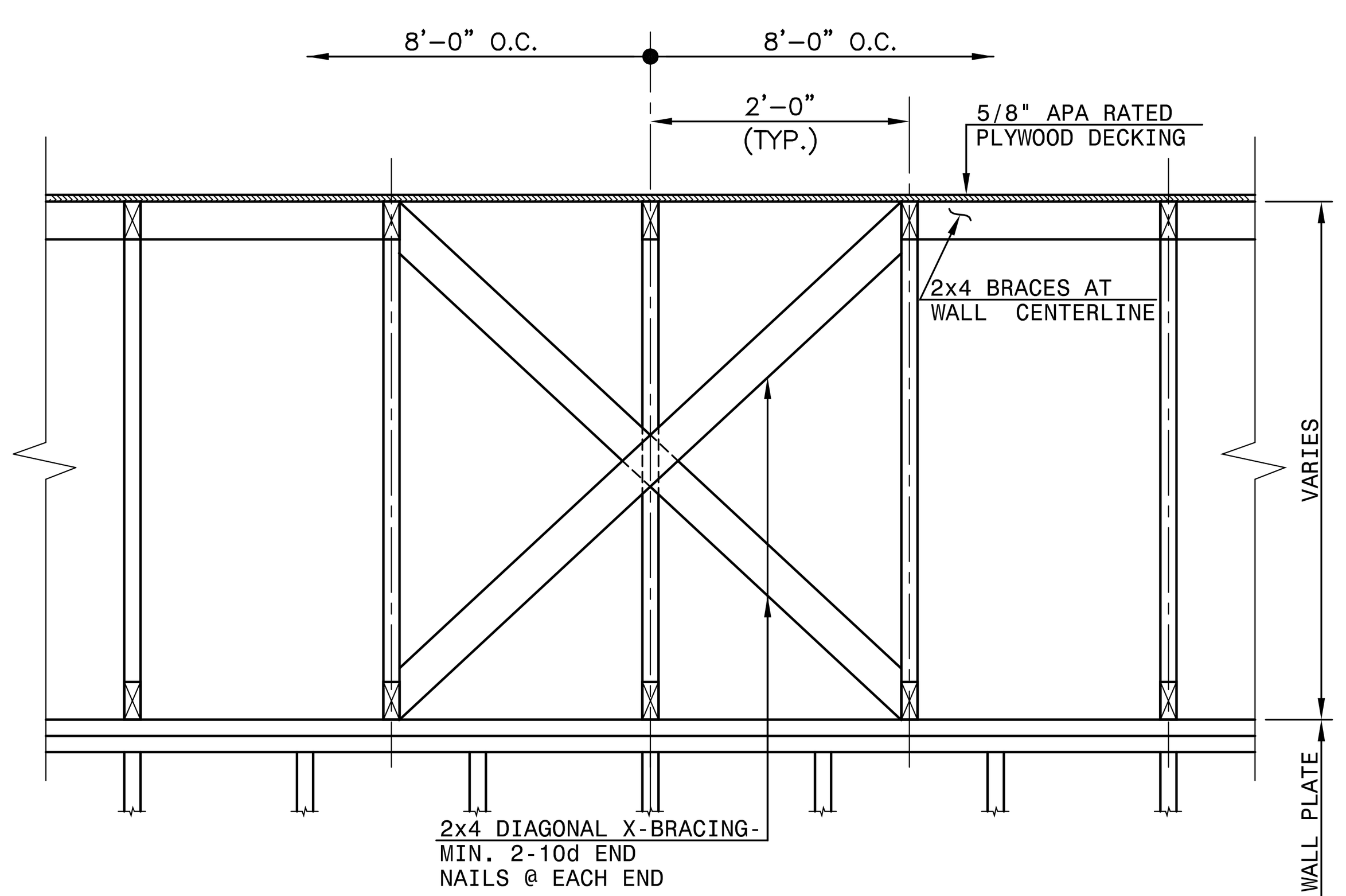
	SPAN	SECTION	SUPPORTING ROOF OVER	JAMB STUDS EA. END JACK	JAMB STUDS FULL HGT
2x4 STUDWALL	0' to 4'-0"		(2)-2x6 W/ 1/2" PLYWOOD PLATE	SINGLE	SINGLE
	4'-1" to 6'-0"		(2)-2x10 W/ 1/2" PLYWOOD PLATE	DOUBLE	DOUBLE
	6'-1" to 8'-0"		(2)-2x12 W/ 1/2" PLYWOOD PLATE	DOUBLE	DOUBLE
2x6 STUDWALL	0' to 4'-0"		(3)-2x8 W/ 1/2" PLYWOOD PLATES	SINGLE	SINGLE
	4'-1" to 6'-0"		(3)-2x10 W/ 1/2" PLYWOOD PLATES	DOUBLE	DOUBLE
	6'-1" to 9'-0"		(3) 1 3/4"x11 1/4" MICROLAM BEAMS	DOUBLE	DOUBLE



NOTE:
IF HEIGHT "D" IS LESS THAN 12", A SINGLE FULL-DEPTH HEADER MAYBE USED

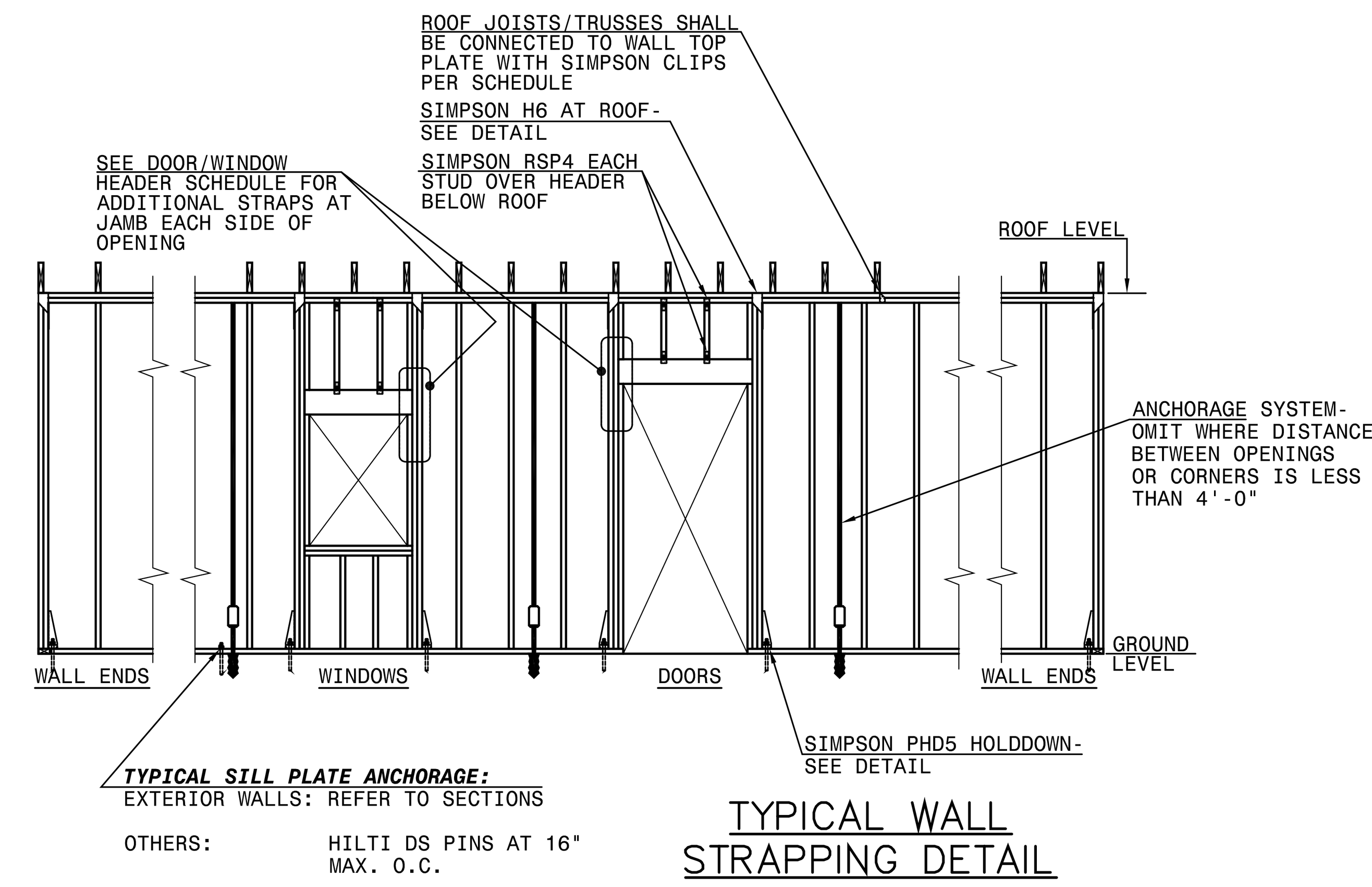
TYPICAL DETAIL AT FRAMED WALL OPENINGS

N.T.S.



DETAIL @ BRACING OF ROOF TRUSSES AT EXTERIOR BEARING WALLS

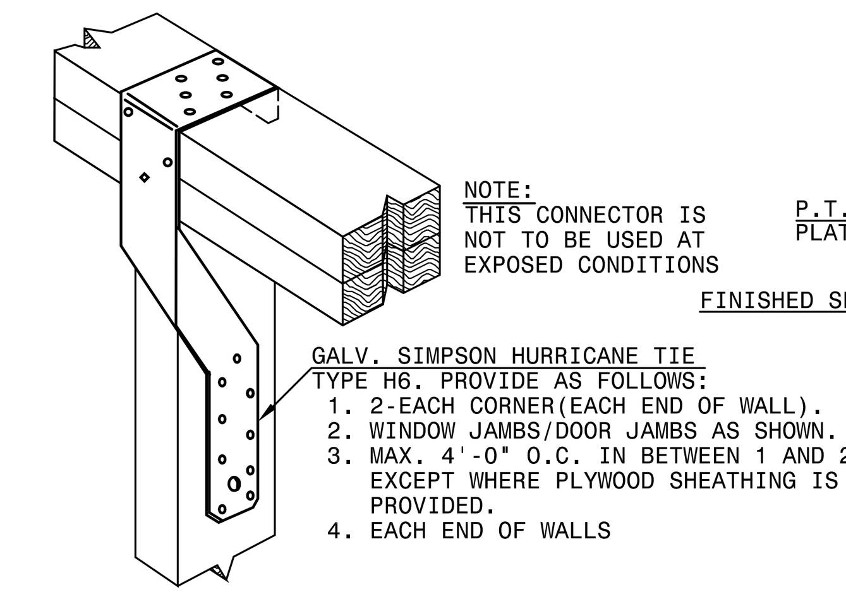
NOTE:
1. BRACING TO BE PROVIDED AT FRONT AND REAR LOAD-BEARING TIMBER EXTERIOR WALLS.
2. BRACING SHOWN IS IN ADDITION TO THAT REQUIRED BY PRE-ENG. TIMBER TRUSS MFR.



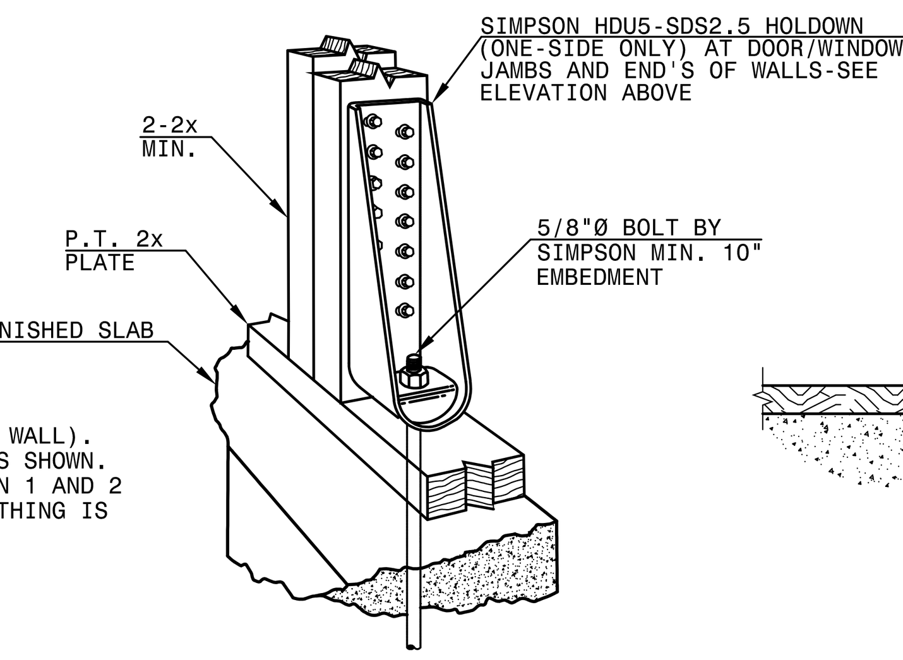
TYPICAL SILL PLATE ANCHORAGE:
EXTERIOR WALLS: REFER TO SECTIONS

OTHERS: HILTI DS PINS AT 16" MAX. O.C.

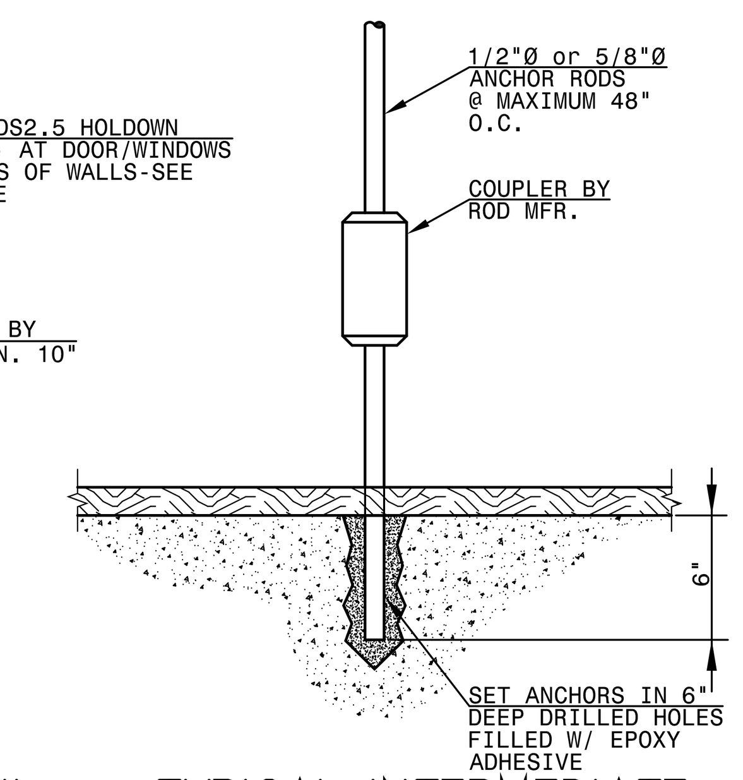
TYPICAL WALL STRAPPING DETAIL



TYPICAL WALL TOP PLATE TO STUD CONNECTION



TYPICAL HOLDDOWN DETAIL @ GROUND FLOOR



TYPICAL INTERMEDIATE ANCHORAGE RODS

TYPICAL STRAPPING DETAILS

THIS DETAIL APPLIES TO:
1. ALL EXTERIOR WALLS

STEEL ROD ANCHORING SYSTEM:
1. STEEL ANCHORING ROD SYSTEM SHALL BE SELECTED FROM ONE OF THE MANUFACTURERS:
   A. SIMPSON STONG-TIE "STONG-ROD" SYSTEM
   B. CLP SYSTEMS "TIE DOWN SYSTEMS"
2. RODS SHALL BE PROVIDED AND ADEQUATELY SIZED TO RECEIVE WIND UPLIFT LOADS FOR ROOF FRAMING. SIZE AND SPACING OF BOLTS SHALL BE DETERMINED BY MFR. BASED ON COORDINATION OF UPLIFT LOADS PROVIDED BY TRUSS MFR. SHOP DRAWINGS. SPACING OF RODS SHALL NOT EXCEED 48" O.C.
3. CONTRACTOR SHALL SUBMIT COMPLETE LAYOUT OF SYSTEM SHOWING LOCATIONS AND SIZES. PROVIDE TYPICAL DETAILS OF SYSTEM WHICH SHOWS ALL CONNECTION HARDWARE, COUPLERS, ETC.

PLYWOOD SHEATHING NAILING SCHEDULE

LOCATION	AT EACH PANEL EDGE	AT INTERIOR SUPPORTS
ROOF SHEATHING	10d @ 6"	10d @ 12"

PRE-ENGINEERED TIMBER ROOF TRUSS HURRICANE CLIP SCHEDULE

LOAD (LBS.)	SIMPSON CLIP TYPE	NOTES
0#-600#	H2.5A	-
601#-1140#	H10A	-
1141#-1465#	H14	-

NOTES:
1. WHERE NET UPLIFT VALUES AT ANY TRUSS REACTION EXCEEDS 1350#, CLIP SHALL BE AS RECOMMENDED BY SIMPSON MFR. OR AS SPECIFIED BY THE TRUSS MFR.
2. NAILS SHALL BE AS SPECIFIED BY SIMPSON.
3. SELECTION OF HURRICANES CLIPS SHALL BE DETERMINED USING THE ABOVE TABLE BASED ON NET UPLIFT REACTIONS SHOWN ON TRUSS MFR. DRAWINGS.

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#	DATE

TYPICAL DETAILS

S4.1

SECTION 03300
CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 WORK INCLUDED

A. Provide all cast-in-place concrete, complete, in place, as indicated on the Drawings, specified herein, and required for the complete installation.

1.02 RELATED WORK

A. Tests for Concrete Materials:
1. Portland Cement shall be sampled and tested to determine the properties in accordance with ASTM C 150.
2. Aggregates shall be sampled and tested in accordance with ASTM C 33 (normal weight).

B. Submit written reports to the Architect for each material sampled and tested, prior to the start of work. Provide the project identification name and number, date of report, name of contractor, name of concrete testing service, source of concrete aggregates, material manufacturer and brand name for manufactured materials, values specified in the referenced specification for each material, and test results. Indicate whether or not material is acceptable for intended use.

C. Supervision: All reinforced concrete construction shall be performed under the personal supervision of the contractor's superintendent. This superintendent shall keep a record of all concrete poured on the job. The record shall show in detail the area poured, the time and date of the pour and weather conditions which existed at the time of the pour. Upon completion of the work, this record shall be turned over to the Architect.

1.03 SUBMITTALS

A. General: Comply with provisions of General Conditions.

B. Manufacturer's Data; Concrete Work: Submit manufacturer's product data with application and installation instructions for proprietary materials and items, including reinforcement and forming accessories, admixtures, patching compounds, waterstops, joint systems, chemical floor hardeners and dry-shake finish materials to the Architect.

C. Shop Drawings; Concrete Reinforcement:

1. Shop drawings shall be submitted by the Contractor to the Architect and review action received prior to fabrication. When corrections are required, copies will be returned noting such. Drawings shall then be corrected and resubmitted until final review action is received.

D. Laboratory test results for concrete materials and mix designs. All mix designs shall be prepared by an independent testing labaoratory.

PART 2 - PRODUCTS

2.01 REINFORCING MATERIALS

A. Reinforcing Bars:

1. Reinforcing: size #3 to #18: ASTM A 615 "Standard Specifications for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement" Grade 60, Deformed. ASTM A 619 "Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement", Grade 60, Deformed.
2. Reinforcing: size 1/4" dia. (#2): ASTM A 1064. Equivalent to size W5 (0.252" at Dia.).

B. Steel Wire: ASTM A 1064, plain, cold-drawn steel.

C. Welded Wire Fabric: ASTM A 1064.

D. Supports for Reinforcement:

1. General: Provide supports for reinforcement including bolsters, chairs and spacers for spacing, supporting and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI recommendations, unless otherwise indicated on the drawings. Wood, brick and other devices will not be acceptable unless specifically noted herein.

2.02 CONCRETE MATERIALS

A. Portland Cement: ASTM C 150, Type 1. Use only one brand of cement throughout the project.

B. Minimum Properties: Design mixes to provide normal weight concrete with the following minimum properties:

1. Foundations: 3000 psi 28-day compressive strength; non-air entrained.
2. Interior Slab on Grade: 3000 psi 28-day compressive strength; non-air entrained.
3. Exterior Slab on Grade: 4500 psi 28-day compressive strength; air entrained (Class F2).
4. Interior formed concrete: 4000 psi 28-day compressive stregth:air entrained
5. Concrete Masonry Grout: 2500 psi, 28-day compressive strength
6 Admixtures: use air-entraining admixture in exposed concrete, unless otherwise indicated on the drawings. Use admixtures for water-reducing and set-control in compliance with the manufacturer's directions and when specifically approved by the Architect.

C. Slump Limits: Proportions and design mixes to result in concrete slump at the point of placement as follows:

1. Ramps and Sloping Surfaces: Not more than 4".

2. Reinforced Foundation Systems: Not less than 1" and not more than 4".

3. Concrete Masonry Grout: Not less than 8" and not more than 11".

4. All Other Concrete: Not less than 1" and not more than 4".

PART 3 - EXECUTION

3.01 INSPECTION

A. General: Examine the areas and conditions under which work of this section will be performed. Correct conditions detrimental to the completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

3.02 QUALITY CONTROL TESTING DURING CONSTRUCTION

B. General: The testing laboratory approved by the Architect will perform all tests and submit test reports.

C. Tests: Sampling and testing for quality control during the placement of concrete shall include the following:

1. Sampling Fresh Concrete: ASTM C 172, except modified for slump to comply with ASTM C 94-92.

2. Slump: ASTM C 143, one test for each concrete load at point of discharge and one test for each set of compressive strength test specimens.

3. Air Content: ASTM C 231, pressure for normal weight concrete; one for each set of compressive strength test specimens.

4. Concrete Temperature: Test hourly when air temperature is 40° F. and below, and when 80° F. and above; and each time a set of compression test specimens are made.

5. Compression Test Specimen: ASTM C 31, one set of 4 standard cylinders for each compressive-strength test, unless otherwise directed. Mold and store cylinders for laboratory-cured test specimens except when field-cured specimens are required.

6. Compressive Strength Tests:

a. ASTM C 39; one set for each 100 cu. yds. or fraction thereof, of each concrete class placed in any one day or for each 5,000 sq. ft. of surface area placed; one specimen tested at 7 days, two specimens tested at 28 days, and one specimen retained in reserve for later testing.

b. When the frequency of testing will provide less than 5 strength tests for a given class of concrete, conduct testing from at least 5 randomly selected batches or from each batch if fewer than 5 are used.

c. When the total quantity of a given class of concrete is less than 50 cu. yds., the strength test may be waived by the Architect if, in his judgment, adequate evidence of satisfactory strength is provided.

d. When the strength of field-cured cylinders is less than 85% of companion labortory-cured cylinders, evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete.

D. Reports: Test results will be reported in writing to the Architect and the Contractor on the same day that tests are made. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in the structure, design compressive strength at 28 days, concrete mix proportions and materials; compressive breaking strength and type of break for both 7-day tests and 28-day tests.

END OF SECTION 03300

SECTION 05120
STRUCTURAL STEEL

PART 1 - GENERAL

1.01 WORK INCLUDED

A. The extent of structural steel work is shown on the drawings, including schedules, notes and details to show size and location of members, typical connections and type of steel.

B. Structural Steel is that work defined in the AISC "Code of Standard Practice", latest edition, and as otherwise shown on the drawings except Article 4.2.1 shall be changed to read: "Approval by the Owner or his representative of shop drawings prepared by the fabricator indicates the fabricator has correctly interpreted the contract requirements. Approval does not relieve the fabricator of the responsibility for accuracy of detailed dimensions on shop drawings nor the general fit-up of parts to be assembled in the field."

1.02 QUALITY ASSURANCE

A. Codes and Standards: Comply with the provisions of the followings except as otherwise indicated on the drawings.
1. American Institute of Steel Construction (AISC). Specification for Structural Steel Buildings, latest edition (with Commentary).

2. Code of Standard Practice for Steel Buildings and Bridges, latest edition, except as modified in 1.01 B.

3. American Welding Society (AWS). Structural Welding Code, D1.1.

4. Research Council on Riveted and Bolted Structural Joints of the Engineering Foundation "Specifications for Structural Joints Using High-Strength Bolts", latest eidtion (with Commentary).

5. Steel Structures Painting Council (SSPC). Steel Structures Painting Manual, Volume 1, latest edition, Good Painting Practice. Steel Structures Painting Manual, Volume 2, latest edidtion, Systems and Specifications.

6. American Society of Testing Materials (ASTM): A 6-: "General Requirements for Delivery of Rolled Steel Plates, Shapes, Sheet Piling and Bars for Structural Use".

1.03 QUALITY CONTROL

A. Fabrication and Erection Qualifications:
1. Fabricator and erector must have a minimum of five years experience with a proven record of satisfactory work.

2. Fabricator and erector must have had work of similar type of construction to be considered as "satisfactory work".

3. The Architect shall be the sole judge as to whether the fabricator and erector satisfactorily meets these requirements.

4. "Steel Fabricator" and "Steel Erector" shall be an organized steel company engaged in this type of work.

5. If any fabricator or steel erector is doubtful as to whether he meets these requirements, he may submit information to the Architect at least 10 days before the bid opening in order to qualify.

B. Qualifications for Welding Work:

1. Qualify welding processes and welding operators in accordance with the D1.1-83 Standard Qualification Procedure in Structural Welding Code of AWS.

2. Provide certification that welders to be employed in the work have satisfactorily passed AWA qualification tests within the previous 12 months. If recertification of welders is required, retesting will be Contractor's responsibility.

C. Source Quality Control:

1. Materials and fabrication procedures are subject to inspection and tests in the mill, shop and field, conducted by a qualified inspection agency. Such inspections and tests will not relieve the Contractor of responsibility for providing materials and fabrication procedures in compliance with specified requirements.

2. Remove and replace materials or fabricated components which do not comply.

1.04 SUBMITTALS

A. Manufacturer's Data, Structural Steel:
1. For information only, submit two copies of producer's or manufacturer's specifications and installation instructions for the following products. Include laboratory test reports and data to show compliance with these specifications (including specified standards). Indicate by transmittal form that copy of each applicable instruction has been distributed to fabricators, installers and erectors.

a. Structural steel (each type), including certified copies of mill reports covering the chemical and physical properties
b. High-strength bolts (each type), including nuts and washers
c. Load indicator washers
d. Unfinished bolts and nuts
e. Structural steel primer paint
f. Shrinkage-resistance grout

B. Shop Drawings, Structural Steel:

1. Submit shop drawings including complete details and schedules for fabrication and shop assembly of members, and details, schedules, procedures and diagrams, showing the sequence of erection.

2. Contractor shall check, approve and stamp all shop drawings prior to submittal to Architect.

3. The shop drawings shall be reviewed by Architect prior to fabrication. Architect's review is for design only. Contractor is responsible for dimensions, quantities, and coordination with other trades. Engineer's review and acceptance of shop drawings is subject to all contract requirements and does not authorize any changes involving additional cost to Owner.

4. Include details of cuts, connections, splices, camber and holes. Indicate welds by standard AWS symbols, and show size, length and type of each weld.

5. Provide setting drawings, templates, and directions for the installation of anchor bolts and anchorages to be installed by others.

6. Shop drawings shall be made to conform to the design drawings. Contract drawings shall take precedence over Shop Drawings.

1.05 Delivery, STORAGE AND HANDLING

A. Delivery: Deliver materials to the site at intervals to ensure uninterrupted progress of the work. Deliver anchor bolts, leveling plates and anchorage devices, which are to be embedded in cast-in-place concrete or masonry, in time not to delay work.

B. Storage: Store materials to permit easy access for inspection and identification. Keep steel members off the ground, using pallets, platforms, or supports. Protect steel members and packaged materials from erosion and deterioration.

C. Handling: Do not store materials on the structure in a manner that might cause distortion or damage to the members or the supporting structures. Repair or replace damaged materials or structures as directed by the Architect.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Wide flange shapes: ASTM A-992 grade 50.

B. Other Rolled Steel Plates, Shapes and Bars: ASTM A 36.

C. Anchor Bolts: ASTM A 1554, headed type unless otherwise indicated on the drawings.

D. Unfinished Threaded Fasteners:
1. ASTM A 307, Grade A, regular low carbon steel bolts and nuts.
2. Provide either hexagonal, or square, heads and nuts, except use only hexagonal units for exposed connections.

E. High-Strength Threaded Fasteners:
1. Heavy hexagon structural bolts, heavy hexagon nuts, hardened washers and direct tension indicating washers shall be quenched and tempered medium-carbon steel bolts, nuts and washers complying with ASTM A 325.
2. High-strength load indicator bolt (LIB) complying with all provisions of ASTM A 325 as manufactured by Lohr Structural Fasteners, Inc., Bethlehem Steel, Industrial Fasteners Div. or approved equal are acceptable.

F. Electrodes for Welding:
1. Shielded Arc Welding: E70 Electrodes, AWS A5.1, AWS 15.5 in accordance with AWS D1.1.
2. abSubmerged Arc Welding: F7 Electrodes, AWS 5.17 or 5.23 in accordance with AWS D1.1.

G. Structural Steel Primer Paint: Steel Structures Painting Council, SSPC - Paint Specification No.

H. Nonmetallic Nonshrink Grout: Premixed, nonmetallic, noncorrosive, nonstaining product containing selected silica sands, portland cement, shrinkage compensating agents, plasticizing and water reducing agents, complying with CRD-C588.

2.02 FABRICATION

A. High-Strength Bolted Connections:
1. Install high-strength threaded fasteners in accordance with AISC "Specifications for Structural Joints" using ASTM A 325.
2. Bolted connections, unless otherwise noted on the drawings, shall be non-slip (friction) type. Threads shall be excluded from shear planes. Unless direct tension load indicator bolt systems ARE USED, all high-strength connectors shall be installed with direct tension indicator washers.
3. All bolts shall have a hardened washer under the turning element.
4. Installation of direct tension indicator washers or direct tension indicator bolt systems shall be in accordance with manufacturer's instructions.

B. Welded Connections:
1. All welding shall be in accordance with "Standard Welding Code" AWS D1.1.
2. Minimum size of fillet weld permitted shall be 3/16".
3. Assemble and weld built-up sections by methods which will produce true alignment of axes without warp or shortening.

C. Shear Connections:
1. Prepare steel surfaces as recommended by the manufacturer of the shear connectors.
2. Weld shear connectors, spaced as shown on the drawings, to beams and girders in composite construction. Use automatic arc welding of headed stud shear connectors in accordance with the manufacturer's printed instructions and in conformance to requirements of section 4 part F of AWS D1.1 "Structural Welding Code".

D. Cooperation with Other Trades:
1. Provide holes for securing other work to structural steel framing, and for the passage of other work through steel framing members, as shown on the final shop drawings. Provide threaded nut welded to framing, and other specialty items as shown to receive other work.
2. Cut, drill or punch holes perpendicular to metal surfaces. Do not flame cut holes or enlarge holes by burning. Drill holes in bearing plates.
3. All loose plates, bolts and inserts between the structural steel and work of other trades are to be furnished by the fabricator and set by other trades.
4. All loose lintels to be furnished by the fabricator and set by other trades.
5. Where steel lintels (other than angles) support concrete block over, add ½" dia. x 4" headed studs welded to top flange in center of grouted block spaced at max. 16" O.C. unless otherwise noted.

2.03 SHOP PAINTING

A. Shop paint all structural steel work, except those members or portions of members to be embedded in or in contact with concrete. Paint embedded steel which is partially exposed on the exposed portions and the initial 2" of embedded areas only.
Do not paint within 2" of surfaces which are to be welded or high-strength bolted with friction type connections for shear, moment resisting or splice connections.
Do not paint surfaces which are scheduled to receive sprayed-applied fire-resistive coatings.
Apply 2 coats of paint to surfaces which are inaccessible after assembly or erection. Change color of second coat to distinguish it from the first.

B. Surface Preparation: After inspection and before shipping, clean steel work to be painted. Remove loose rust, loose mill scale, and splatter, slag or flux deposits. Clean steel in accordance with Steel Structures Painting Council (SSPC) using one or more of the following.
SP-2 "Hand Tool Cleaning"
SP-3 "Power Tool Cleaning"
SP-7 "Brush-Off Blast Cleaning"

Painting: Immediately after surface preparation, apply structural steel primer paint in accordance with the manufacturer's instructions and at a rate to provide a uniform dry film thickness of 2.0 mils. Use painting methods which will result in full coverage of joints, corners, edges and all exposed surfaces.

PART 3 - EXECUTION

3.01 INSPECTION
Contractor must examine the areas and conditions under which structural steel work is installed, and notify the Architect in writing of conditions detrimental to the completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 FIELD MEASUREMENTS

A. Contractor shall make measurements in the field to supplement or verify dimensions indicated and to determine locations, limits and elevations of all adjacent existing structures where they form a connected structure prior to submittal of shop drawings and commencement of construction.

B. All field dimensions for preparation of steel details shall be indicated on shop drawings.

3.03 ERECTION

A. General:

1. Comply with AISC Specifications, AISC Code of Standard Practice, OSHA requirements, and as herein specified, as defined by Article 7.9.3 of non-self-supporting steel frames
2. All steel framing shall be considered the AISC Code of Standard Practice, latest edition.
3. Contractor shall provide all necessary temporary support until required connections or other interacting elements are complete.

B. Temporary Shoring and Bracing: Provide temporary shoring and bracing members with connections of sufficient strength to bear imposed loads. Remove temporary members and connections only after all permanent members are in place and final connections are made. Provide temporary guy lines to achieve proper alignment of the structures as erection proceeds. Where camber is specified, the cambered position shall be maintained and continuously monitored until all connections are complete.t

C. Anchor Bolts:
1. Furnish anchor bolts and connectors for securing structural steel to foundations and other in-place work.
2. Furnish templates and devices for presetting bolts and anchors to accurate locations.
3. Refer to Division 3 of these specifications for anchor bolt installation requirements in concrete, and Division 4 for masonry installation.

D. Setting Leveling Plates, Base Plates and Bearing Plates:
1. Clean concrete and masonry bearing surfaces of bond-reducing materials and roughen to improve bond to surfaces. Clean the bottom surface of base and bearing plates.
2. Set loose and attached bearing plates for structural members on steel wedges or adjusting devices. Column base plates to be set on 1/4" thick steel leveling plates of same horizontal dimensions as base plate. Leveling plates to be set on min. 3/4" non-shrink grout to exact level and grade elevation a min. of 3 days prior to erection of columns over.
3. Tighten the anchor bolts after the supported members have been positioned and plumbed. Do not remove wedges or shims, but if protruding, cut off flush with the edge of the base or bearing plate prior to packing with grout.
4. Pack grout between bearing surfaces and bases or plates to ensure that no voids remain. Finish exposed surfaces, protect installed materials, and allow to cure in compliance with manufacturer's instructions.

E. Touch-up Painting:

Immediately after erection, clean field welds, bolted connections, and abraded areas of the shop paint. Apply paint to exposed areas with the same material as used for shop painting. Apply by brush or spray to provide a minimum dry film thickness of 2.0 mils.

END OF SECTION 05120

DPR ARCHITECTURE
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No. 000432
STRUCTURAL
ENGINEER
W. HUNTER SAUSSY, III

Not Valid Unless Signed

BUILDING #2
COLDBROOK PLAZA
OLD RICHMOND ROAD
PORT WENTWORTH, GA

BID

PROJECT NUMBER: 2367
PROJECT DATE: 10/01/24
DRAWN BY: H. Saussy III
APPROVED BY: H. Saussy III

SCHEDULE OF REVISIONS

#	DATE

SPECIFICATIONS

S5.1

SAUSSY ENGINEERING
400 Johnny Mercer Boulevard • Suite E
P.O. Box 30597 • Savannah, Georgia 31410
Phone: (912) 898-8255 • Fax: (912) 898-1882

PROJECT # 24034 - S5-1.dwg 9/18/24 11:35 am

SECTION 06192

PREFABRICATED METAL-PLATE-CONNECTED WOOD TRUSSES

PART 1 - GENERAL

1.01 SUMMARY

A. THIS SECTION INCLUDES THE FOLLOWING:
1. GABLE-SHAPED TRUSSES.
2. HIP AND GIRDER TRUSSES AT HIP ENDS OF ROOF.
3. MONOPITCH TRUSSES.

B. ROOF SHEATHING IS SPECIFIED IN DIVISION 6 SECTION "ROUGH CARPENTRY."

1.02 DEFINITIONS

PREFABRICATED METAL-PLATE-CONNECTED WOOD TRUSSES INCLUDE PLANAR STRUCTURAL UNITS CONSISTING OF METAL-PLATE-CONNECTED MEMBERS THAT ARE FABRICATED FROM DIMENSION LUMBER AND THAT HAVE BEEN CUT AND ASSEMBLED PRIOR TO DELIVERY TO THE PROJECT SITE.

1.03 SUBMITTALS
A. GENERAL: SUBMIT THE FOLLOWING IN ACCORDANCE WITH CONDITIONS OF CONTRACT AND DIVISION 1 SPECIFICATION SECTIONS.

B. PRODUCT DATA FOR LUMBER, METAL CONNECTOR PLATES, HARDWARE, FABRICATION PROCESS, AND FASTENERS.

C. WOOD TREATMENT DATA AS FOLLOWS INCLUDING CHEMICAL TREATMENT MANUFACTURER'S INSTRUCTIONS FOR HANDLING, STORING, INSTALLATION, AND FINISHING OF TREATED MATERIAL:
1. CERTIFICATION BY TREATING PLANT THAT REQUIRED FIRE-RETARDANT TREATMENT COMPLIES WITH SPECIFIED STANDARD AND OTHER REQUIREMENTS, AND BY METAL CONNECTOR PLATE MANUFACTURER THAT FIRE-RETARDANT FORMULATION IS APPROVED FOR USE WITH METAL CONNECTOR PLATES FOR TRUSS EXPOSURE INDICATED.
2. MATERIAL TEST REPORTS FROM QUALIFIED INDEPENDENT TESTING LABORATORY INDICATING AND INTERPRETING TEST RESULTS RELATIVE TO COMPLIANCE OF FIRE-RETARDANT-TREATED WOOD PRODUCTS WITH REQUIREMENTS INDICATED.

D. SHOP DRAWINGS INDICATING SPECIES, SPECIES GROUP, SIZES, AND STRESS GRADES OF LUMBER TO BE USED; PITCH, SPAN, CAMBER, CONFIGURATION, AND SPACING FOR EACH TYPE OF TRUSS REQUIRED; TYPE, SIZE, MATERIAL, FINISH, DESIGN VALUES, AND LOCATION OF METAL CONNECTOR PLATES; AND BEARING DETAILS.
1. TO THE EXTENT ENGINEERING DESIGN CONSIDERATIONS ARE INDICATED AS FABRICATOR'S RESPONSIBILITY, INCLUDE DESIGN ANALYSIS INDICATING LOADING, ASSUMED ALLOWABLE STRESS, STRESS DIAGRAMS AND CALCULATIONS, AND OTHER INFORMATION NEEDED FOR REVIEW THAT HAVE BEEN SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.
2. PROVIDE SHOP DRAWINGS THAT HAVE BEEN SIGNED AND STAMPED BY A QUALIFIED PROFESSIONAL ENGINEER.

E. PRODUCT CERTIFICATE, SIGNED BY OFFICER OF FABRICATING FIRM, CERTIFYING THAT METAL-PLATE-CONNECTED WOOD TRUSSES SUPPLIED FOR PROJECT COMPLY WITH SPECIFIED REQUIREMENTS.

1.04 QUALITY ASSURANCE

A. TPI STANDARDS: COMPLY WITH APPLICABLE REQUIREMENTS AND RECOMMENDATIONS OF THE FOLLOWING TRUSS PLATE INSTITUTE (TPI) PUBLICATIONS:
1. "DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES."
2. "DESIGN SPECIFICATION FOR METAL PLATE CONNECTED PARALLEL CHORD WOOD TRUSSES."
3. "COMMENTARY AND RECOMMENDATIONS FOR HANDLING AND ERECTING WOOD TRUSSES."
4. "COMMENTARY AND RECOMMENDATIONS FOR BRACING WOOD TRUSSES."
5. "QUALITY STANDARD FOR METAL PLATE CONNECTED WOOD TRUSSES."

B. CONNECTOR PLATE MANUFACTURER'S QUALIFICATIONS: A MANUFACTURER THAT IS A MEMBER OF TPI AND THAT COMPLIES WITH TPI QUALITY CONTROL PROCEDURES FOR MANUFACTURE OF CONNECTOR PLATES PUBLISHED IN TPI "QUALITY STANDARD FOR METAL CONNECTOR PLATE MANUFACTURE."

C. WOOD STRUCTURAL DESIGN STANDARD: COMPLY WITH APPLICABLE REQUIREMENTS OF N.F.P.A. "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION."

D. SINGLE-SOURCE ENGINEERING RESPONSIBILITY: PROVIDE TRUSSES ENGINEERED BY THE METAL PLATE CONNECTOR MANUFACTURER TO SUPPORT SUPERIMPOSED DEAD, LIVE AND WIND LOADS INDICATED, WITH DESIGN APPROVED AND CERTIFIED BY A QUALIFIED PROFESSIONAL ENGINEER.

E. ENGINEER QUALIFICATIONS: A PROFESSIONAL ENGINEER LEGALLY AUTHORIZED TO PRACTICE IN JURISDICTION WHERE PROJECT IS LOCATED AND EXPERIENCED IN PROVIDING ENGINEERING SERVICES OF THE KIND INDICATED THAT HAVE RESULTED IN THE INSTALLATION OF METAL-PLATE-CONNECTED WOOD TRUSSES SIMILAR TO THOSE OF THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.

F. FABRICATOR'S QUALIFICATIONS:
1. USE A FIRM THAT COMPLIES WITH THE FOLLOWING REQUIREMENTS FOR QUALITY CONTROL AND IS EXPERIENCED IN PREFABRICATING METAL-PLATE-CONNECTED WOOD TRUSSES SIMILAR TO THOSE OF THIS PROJECT THAT HAVE A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.
2. FABRICATOR PARTICIPATES IN A RECOGNIZED QUALITY ASSURANCE PROGRAM THAT INVOLVES INSPECTION BY SPIB; TIMBER PRODUCTS INSPECTION, INC.; TRUSS PLATE INSTITUTE; OR OTHER INDEPENDENT INSPECTION AND TESTING AGENCY ACCEPTABLE TO ARCHITECT AND AUTHORITIES HAVING JURISDICTION.

G. SINGLE SOURCE RESPONSIBILITY FOR CONNECTOR PLATES: PROVIDE METAL CONNECTOR PLATES FROM A SINGLE MANUFACTURER.

1.05 DELIVERY, STORAGE, AND HANDLING

A. HANDLE AND STORE TRUSSES WITH CARE AND COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND TPI RECOMMENDATIONS TO AVOID DAMAGE FROM BENDING, OVERTURNING, OR OTHER CAUSE WHICH TRUSSES ARE NOT DESIGNED TO RESIST OR ENDURE.

1.06 SEQUENCING AND SCHEDULING

A. TIME DELIVERY AND ERECTION OF TRUSSES TO AVOID EXTENDED ON-SITE STORAGE AND TO AVOID DELAYING WORK OF OTHER TRADES WHOSE WORK MUST FOLLOW ERECTION OF TRUSSES.

PART 2 - PRODUCTS

2.01 CONNECTOR PLATE MANUFACTURERS

A. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS OFFERING METAL CONNECTOR PLATES THAT MAY BE INCORPORATED IN THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
1. ALPINE ENGINEERED PRODUCTS, INC.
2. BEMAX OF FLORIDA, INC.
3. GANG-NAIL SYSTEMS, INC.
4. TEE-LOK CORP.
5. TRUSS CONNECTORS OF AMERICA.
6. TRUSWAL SYSTEMS CORPORATION.

2.02 LUMBER

A. FACTORY MARK EACH PIECE OF LUMBER WITH TYPE, GRADE, MILL, AND GRADING AGENCY.

B. LUMBER STANDARD: MANUFACTURE LUMBER TO COMPLY WITH PS 20 "AMERICAN SOFTWOOD LUMBER STANDARD" AND WITH APPLICABLE GRADING RULES OF INSPECTION AGENCIES CERTIFIED BY AMERICAN LUMBER STANDARDS COMMITTEE'S (ALSC) BOARD OF REVIEW.

C. INSPECTION AGENCIES: INSPECTION AGENCIES AND THE ABBREVIATIONS USED TO REFERENCE THEM TO LUMBER GRADES AND SPECIES INCLUDE THE FOLLOWING:
1. NLGA - NATIONAL LUMBER GRADES AUTHORITY (CANADIAN).
2. SPIB - SOUTHERN PINE INSPECTION BUREAU.
3. WCLIB - WEST COAST LUMBER INSPECTION BUREAU.
4. WWPA - WESTERN WOOD PRODUCTS ASSOCIATION.

D. NOMINAL SIZES ARE INDICATED, EXCEPT AS SHOWN BY DETAIL DIMENSIONS.

E. PROVIDE DRESSED LUMBER, S4S, MANUFACTURED TO ACTUAL SIZES REQUIRED BY PS 20 TO COMPLY WITH REQUIREMENTS INDICATED BELOW:
1. MOISTURE CONTENT: SEASONED, WITH 19 PERCENT MAXIMUM MOISTURE CONTENT AT TIME OF DRESSING AND SHIPMENT FOR SIZES 2 INCHES OR LESS IN NOMINAL THICKNESS, UNLESS OTHERWISE INDICATED.

2.03 METAL CONNECTOR PLATES

A. GENERAL: FABRICATE CONNECTOR PLATES FROM METAL COMPLYING WITH REQUIREMENTS INDICATED IN THIS ARTICLE.

B. HOT-DIP GALVANIZED STEEL SHEET: STRUCTURAL (PHYSICAL) QUALITY STEEL SHEET COMPLYING WITH ASTM 653, GRADE A; ZINC COATED BY HOT-DIP PROCESS TO COMPLY WITH ASTM A 653, DESIGNATION G60; MINIMUM COATED METAL THICKNESS INDICATED BUT NOT LESS THAN 0.036 INCH.

C. ELECTROLYTIC ZINC-COATED STEEL SHEET: STRUCTURAL (PHYSICAL) QUALITY STEEL SHEET COMPLYING WITH ASTM A 879, COATING CLASS C, AND, FOR STRUCTURAL PROPERTIES, WITH ASTM A 653 GRADE A ; ZINC COATED BY ELECTRO-DEPOSITION; WITH MINIMUM COATED METAL THICKNESS INDICATED BUT NOT LESS THAN 0.047 INCH.

D. ALUMINUM-ZINC ALLOY-COATED STEEL SHEET: STRUCTURAL (PHYSICAL) QUALITY STEEL SHEET COMPLYING WITH ASTM A 792, COATING DESIGNATION AZ 50, AND, FOR A STRUCTURAL PROPERTIES, WITH ASTM A 653, GRADE A; ALUMINUM-ZINC ALLOY-COATED BY HOT-DIP PROCESS; WITH MINIMUM COATED METAL THICKNESS INDICATED BUT NOT LESS THAN 0.036 INCH.

E. STAINLESS STEEL SHEET: CHROMIUM NICKEL STEEL SHEET COMPLYING WITH ASTM A 167, TYPE 304, AND, FOR STRUCTURAL PROPERTIES, ASTM A 653, GRADE A; WITH MINIMUM METAL THICKNESS INDICATED BUT NOT LESS THAN 0.035 INCH.

2.04 FASTENERS

A. GENERAL: PROVIDE FASTENERS OF SIZE AND TYPE INDICATED THAT COMPLY WITH REQUIREMENTS SPECIFIED IN THIS ARTICLE FOR MATERIAL AND MANUFACTURE.
1. WHERE TRUSS MEMBERS ARE EXPOSED TO WEATHER OR TO HIGH RELATIVE HUMIDITIES, PROVIDE FASTENERS WITH A HOT-DIP ZINC COATING PER ASTM A153 OR OF AISI TYPE 304 STAINLESS STEEL.

B. NAILS, WIRE, BRADS, AND STAPLES: FS FF-N-105.

C. POWER DRIVEN FASTENERS: NATIONAL EVALUATION REPORT NER-272.

D. WOOD SCREWS: ANSI B18.6.1.

E. LAG BOLTS: ANSI B18.2.1.

F. BOLTS: STEEL BOLTS COMPLYING WITH ASTM A 307, GRADE A; WITH ASTM A 563 HEX NUTS AND WHERE INDICATED, FLAT WASHERS.

2.05 METAL FRAMING ANCHORS

A. GENERAL:
1. PROVIDE METAL FRAMING ANCHORS OF TYPE, SIZE, METAL, AND FINISH INDICATED THAT COMPLY WITH REQUIREMENTS SPECIFIED INCLUDING THE FOLLOWING:

B. CURRENT EVALUATION/RESEARCH REPORTS:
1. PROVIDE PRODUCTS FOR WHICH REPORTS EXIST FROM A MODEL CODE ORGANIZATION ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION THAT EVIDENCE COMPLIANCE OF METAL FRAMING ANCHORS FOR APPLICATION INDICATED WITH THE BUILDING CODE IN EFFECT FOR THIS PROJECT.
2. ALLOWABLE DESIGN LOADS: PROVIDE PRODUCTS FOR WHICH MANUFACTURER PUBLISHES ALLOWABLE DESIGN LOADS THAT ARE DETERMINED FROM EMPIRICAL DATA OR BY RATIONAL ENGINEERING ANALYSIS AND THAT ARE DEMONSTRATED BY COMPREHENSIVE TESTING PERFORMED BY A QUALIFIED INDEPENDENT TESTING LABORATORY.

C. GALVANIZED STEEL SHEET: STEEL SHEET ZINC-COATED BY HOT-DIP PROCESS ON CONTINUOUS LINES PRIOR TO FABRICATION TO ASTM A 653 FOR COATING DESIGNATION G60.

2.06 FABRICATION

A. CUT TRUSS MEMBERS TO ACCURATE LENGTHS, ANGLES, AND SIZES TO PRODUCE CLOSE-FITTING JOINTS WITH WOOD-TO-WOOD BEARING IN ASSEMBLED UNITS.

B. FABRICATE METAL CONNECTOR PLATES TO SIZE, CONFIGURATION, THICKNESS, AND ANCHORAGE DETAILS REQUIRED TO WITHSTAND DESIGN LOADINGS FOR TYPES OF JOINT DESIGNS INDICATED.

C. ASSEMBLE TRUSS MEMBERS IN DESIGN CONFIGURATION INDICATED USING JIGS OR OTHER MEANS TO ENSURE UNIFORMITY AND ACCURACY OF ASSEMBLY WITH JOINTS CLOSELY FITTED TO COMPLY WITH TOLERANCES SPECIFIED IN TPI "QUALITY STANDARD FOR METAL PLATE CONNECTED WOOD TRUSSES." POSITION MEMBERS TO PRODUCE DESIGN CAMBER INDICATED.

D. CONNECT TRUSS MEMBERS BY MEANS OF METAL CONNECTOR PLATES ACCURATELY LOCATED AND SECURELY FASTENED TO EACH SIDE OF WOOD MEMBERS BY MEANS INDICATED OR APPROVED. MANUFACTURER, MODEL AND TYPE TO BE SPECIFIED ON SHOP DRAWINGS BASED ON DESIGN ANALYSIS, UNLESS NOTED ON DRAWINGS.

PART 3 - EXECUTION

3.01 INSTALLATION
A. GENERAL: ERECT AND BRACE TRUSSES TO COMPLY WITH APPLICABLE REQUIREMENTS OF REFERENCED TPI STANDARDS.

B. WHERE TRUSSES DO NOT FIT, RETURN THEM TO FABRICATOR AND REPLACE WITH TRUSSES OF CORRECT SIZE; DO NOT ALTER TRUSSES IN THE FIELD.

C. ERECT TRUSSES WITH PLANE OF TRUSS WEBS VERTICAL (PLUMB) AND PARALLEL TO EACH OTHER, LOCATED ACCURATELY AT DESIGN SPACINGS INDICATED.

D. HOIST TRUSSES IN PLACE BY MEANS OF LIFTING EQUIPMENT SUITED TO SIZES AND TYPES OF TRUSSES REQUIRED, EXERCISING CARE NOT TO DAMAGE TRUSS MEMBERS OR JOINTS BY OUT-OF-PLANE BENDING OR OTHER CAUSES.

E. ANCHOR TRUSSES SECURELY AT ALL BEARING POINTS TO COMPLY WITH METHODS AND DETAILS INDICATED.

F. INSTALL PERMANENT BRACING AND RELATED COMPONENTS TO ENABLE TRUSSES TO MAINTAIN DESIGN SPACING, WITHSTAND LIVE AND DEAD LOADS INCLUDING LATERAL LOADS, AND TO COMPLY WITH OTHER INDICATED REQUIREMENTS.

G. DO NOT CUT OR REMOVE TRUSS MEMBERS.

END OF SECTION 06192

DPR ARCHITECTURE
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P.O. BOX 1382
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GEORGIA 30458
www.dprarch.com

GEORGIA REGISTERED No. 000432 STRUCTURAL ENGINEER
W. HUNTER SAUSSY, III
Not Valid Unless Signed

BUILDING #2
COLDBROOK PLAZA
OLD RICHMOND ROAD
PORT WENTWORTH, GA

BID

PROJECT NUMBER: 2367
PROJECT DATE: 10/01/24
DRAWN BY: H. Saussy III
APPROVED BY: H. Saussy III

SCHEDULE OF REVISIONS

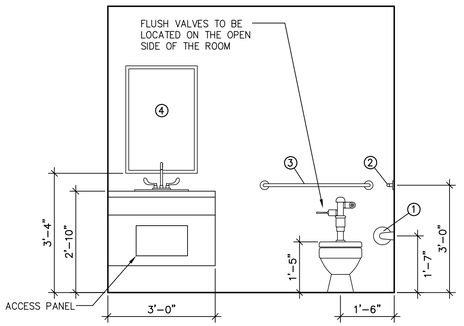
#	DATE

SPECIFICATIONS

S5.2

SAUSSY ENGINEERING
400 Johnny Mercer Boulevard • Suite E
P.O. Box 30597 • Savannah, Georgia 31410
Phone: (912) 898-8255 • Fax: (912) 898-1882

PROJECT # 24034 - S5-2.dwg 9/18/24 11:35 am



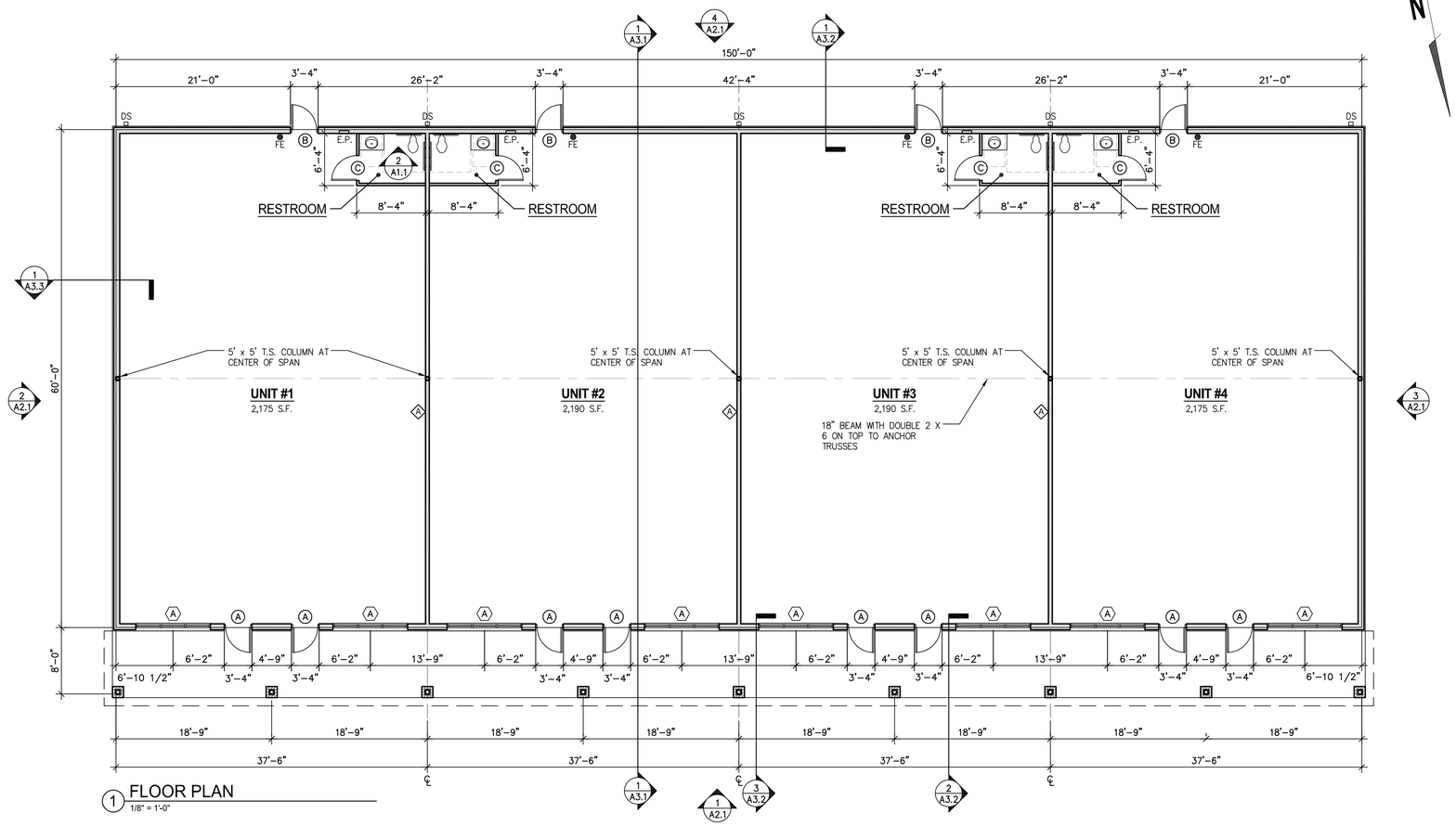
2 BATHROOM ELEVATION
1/2" = 1'-0"

RESTROOM ACCESSORIES

1. TOILET PAPER HOLDER – 19" A.F.F.
2. 42" GRAB BAR (GB)
3. 36" GRAB BAR (GB)
4. 24 X 36 MIRROR

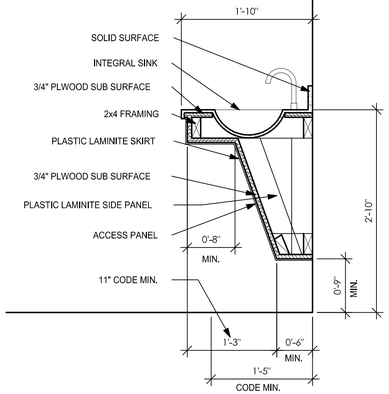
NOTE: FIXTURES SHOWN CROSSHATCHED SHALL BE MOUNTED FOR HANDICAPPED

NOTE: ALL GRAB BARS SHALL BE MOUNTED INTO SOLID 2x BLOCKING



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

NOTE:
CONTRACTOR TO PROVIDE SHOP DRAWINGS ON VANITY



3 ADA BATHROOM DETAIL
1" = 1'-0"

ROOM FINISH SCHEDULE

SPACE NAME	FLOOR	BASE	WALLS	CEILING	CEILING HEIGHT	COMMENTS
FIRST FLOOR						
UNIT #1	CON	––	GWB/P	ES	––	
RESTROOM	LVP	RB	GWB/P	GCB/P	9'–0"	
UNIT #2	CON	––	GWB/P	ES	––	
RESTROOM	LVP	RB	GWB/P	GCB/P	9'–0"	
UNIT #3	CON	––	GWB/P	ES	––	
RESTROOM	LVP	RB	GWB/P	GCB/P	9'–0"	
UNIT #4	CON	––	GWB/P	ES	––	
RESTROOM	LVP	RB	GWB/P	GCB/P	9'–0"	

FINISH ABBREVIATIONS

CON – CONCRETE
GCB – GYPSUM CEILING BOARD
RB – RUBBER BASE
GWB – GYPSUM WALL BOARD
P – PAINT
ES – EXPOSED STRUCTURE
LVP – LUXURY VINYL PLANK

WALL TYPES

A – 2 HOUR RATED FIRE WALL– 4" WOOD STUDS AT 16" O.C. WITH 2 LAYERS OF 5/8" TYPE "X" GYPSUM WALL BOARD EACH SIDE

DOOR SCHEDULE

MK.	DOOR SIZE	DOOR TYPE	DOOR ELEV	FRAME TYPE	FRAME ELEV	RATED	COMMENTS
A	3'–0" x 7'–0" x 1–3/4"	ALS	A	ALS	1		HARDWARE BY ALUMINUM STOREFRONT MNFR., TO MATCH
B	3'–0" x 7'–0" x 1–3/4"	FM	B	HM	2		PROVIDE LOCKSET, PANIC H.W., CLOSER, HC THRESH, SEAL & SWEEP
C	3'–0" x 7'–0" x 1–3/4"	SCW	C	HM	3		PROVIDE LOCKSET, HARDWARE, KICK PLATES AND CLOSER

ABBREVIATIONS:

ALS – ALUMINUM STOREFRONT
FM – FLUSH METAL (INSULATED)
HM – HOLLOW METAL
SCW – SOLID CORE WOOD

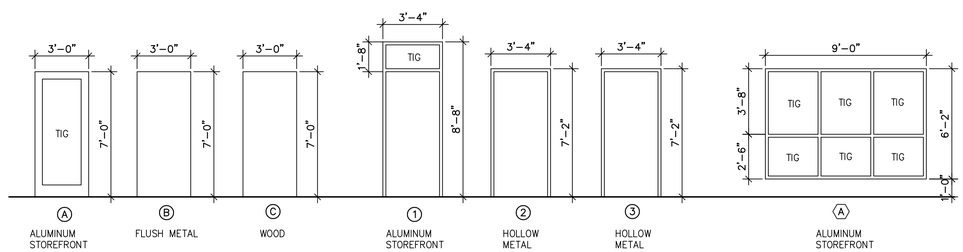
NOTES:

1. PROVIDE WEATHER STRIPPING AND CLOSERS AT ALL EXTERIOR DOORS.
2. ALL THRESHOLDS OF REQUIRED EXIT EGRESS DOORS SHALL MEET ADA REQUIREMENTS.
3. ALL DOOR WIDTHS SHOWN IN THE SCHEDULE ARE ROUGH OPENING AND EQUAL:
   = DOOR WIDTH + 3.5" IN WOOD STUD
   = DOOR WIDTH + 4" IN MASONRY
4. CONTRACTOR TO PROVIDE HEAVY DUTY DOOR HARDWARE; WITH ALL DOOR RECEIVING HINGES, PLATES, STOPS AND CORES. USE SCHLAGE OR BEST LEVER TYPE HARDWARE.

GLAZING SCHEDULE

SYM	THICKNESS	DESCRIPTION
TG	5/8"	CLEAR TEMPERED GLASS
TIG	1"	CLEAR TEMPERED INSULATING GLASS
IG	1"	CLEAR INSULATING GLASS

1. TG GLAZING SHALL BE USED IN ALL OPENINGS THAT ARE LOCATED WITHIN 24" OF A DOOR OR FLOOR.
2. ALL EXTERIOR GLASS SHALL BE LOW E WITH 60% TINT.



4 DOOR & FRAME ELEVATIONS
1/4" = 1'-0"

5 WINDOW ELEVATION
1/4" = 1'-0"

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TIMOTHY KEVIN PALMER

COLDBROOK PLAZA BUILDING #2
OLD RICHMOND ROAD
PORT WENTWORTH, GA

CHECK SET

PROJECT NUMBER: 2367
PROJECT DATE: 10/1/24
DRAWN BY: AMG
APPROVED BY: TKP

SCHEDULE OF REVISIONS

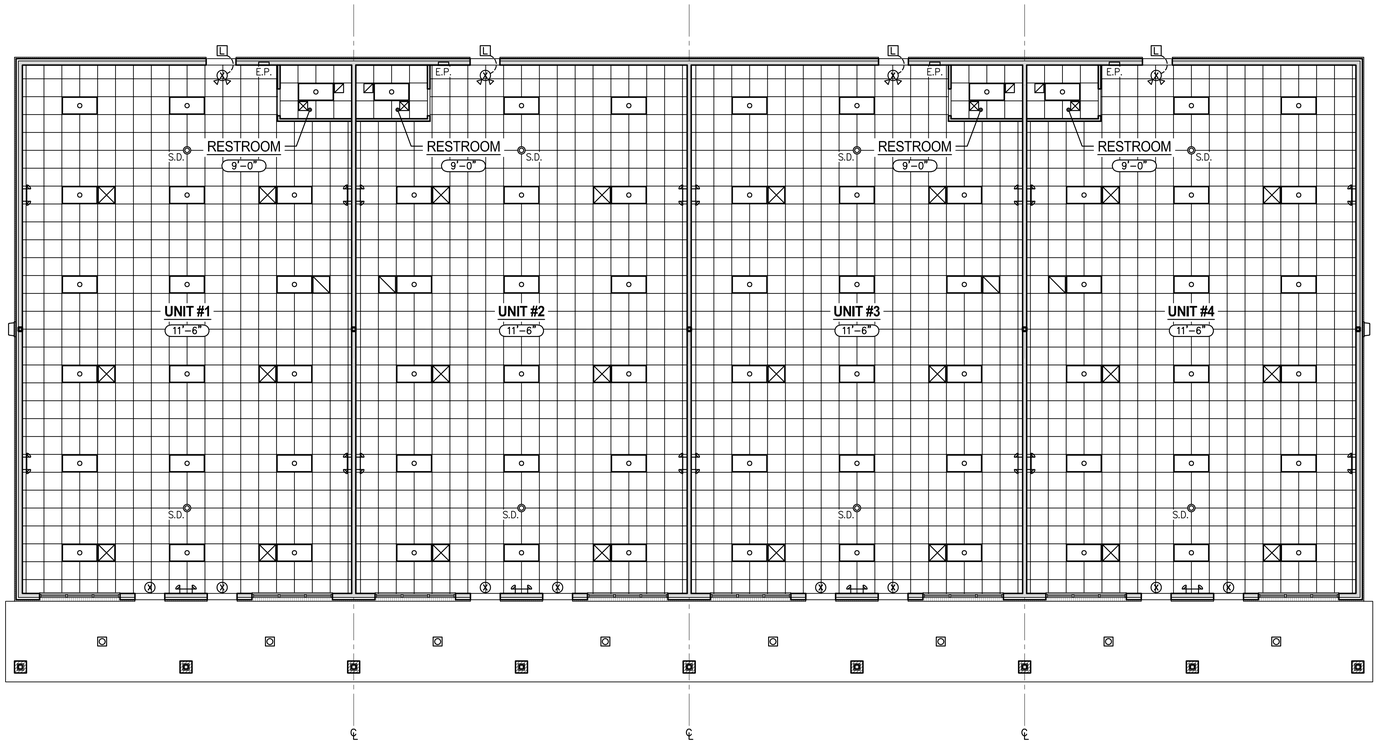
#	DATE

FLOOR PLAN

A1.1

REFLECTED CEILING LEGEND

E.S.	EXPOSED STRUCTURE
	2x2 ACOUSTICAL CEILING TILE AND GRID
	CEILING SUPPLY DIFFUSER
	CEILING RETURN
	EXHAUST FAN
	2x4 LED LINEAR FLAT PANEL
	RECESSED LED FIXTURE
	EXIT LIGHT FIXTURE, ARROW INDICATES EGRESS ROUTE
	EXIT LIGHT FIXTURE W/ EMERGENCY LIGHT ON BATTERY BACK-UP, "L" INDICATES REMOTE LAMP
	EMERGENCY LIGHT ON BATTERY BACK-UP
	WALL PACK LIGHT FIXTURE W/ PHOTOCELL
S.D.	SMOKE DETECTOR



1 REFLECTED CEILING PLAN
1/8" = 1'-0"

N

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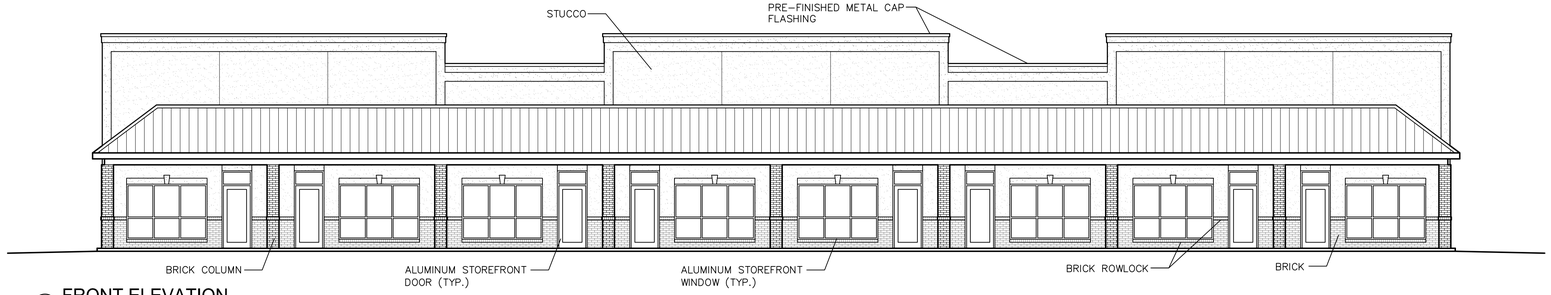
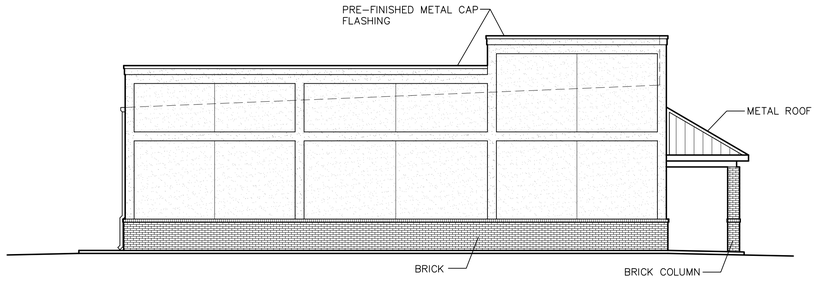
REFLECTED CEILING PLAN

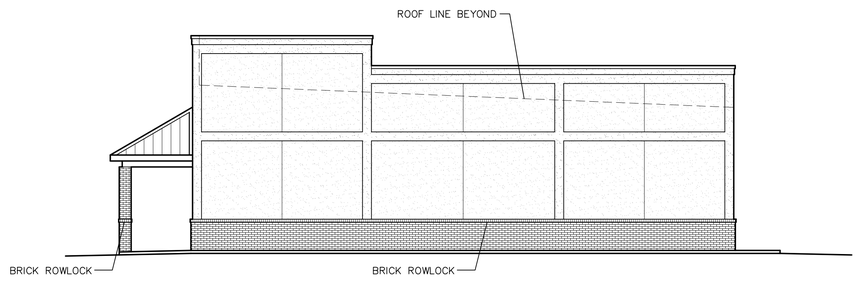
A1.2



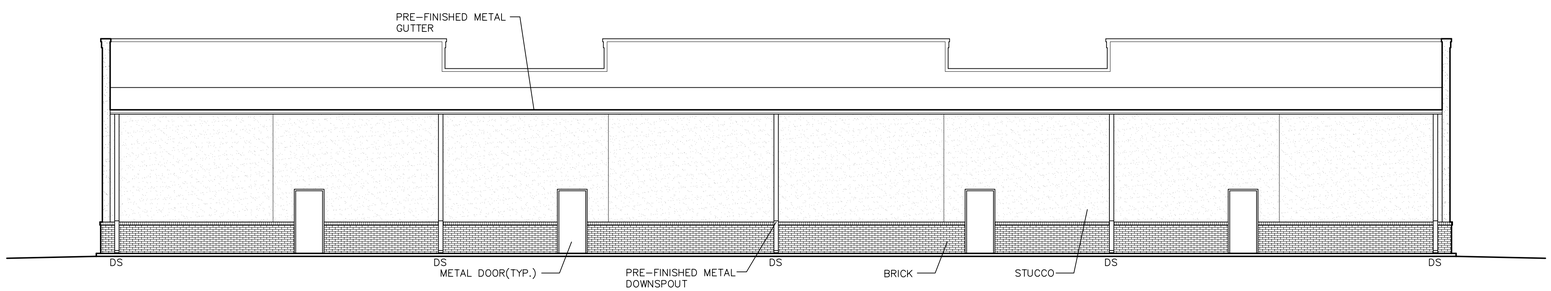
1 FRONT ELEVATION
1/8" = 1'-0"



2 SIDE ELEVATION
1/8" = 1'-0"



3 SIDE ELEVATION
1/8" = 1'-0"



4 REAR ELEVATION
1/8" = 1'-0"

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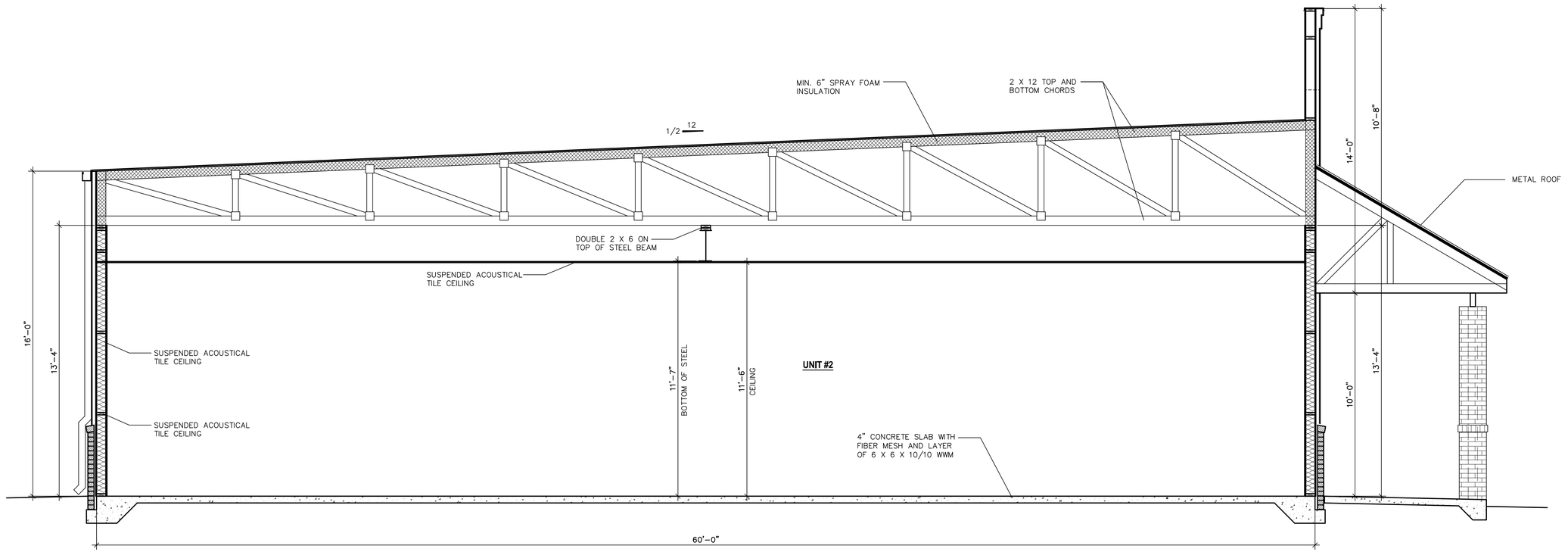
EXTERIOR ELEVATIONS

A2.1



1 BUILDING SECTION
3/8" = 1'-0"

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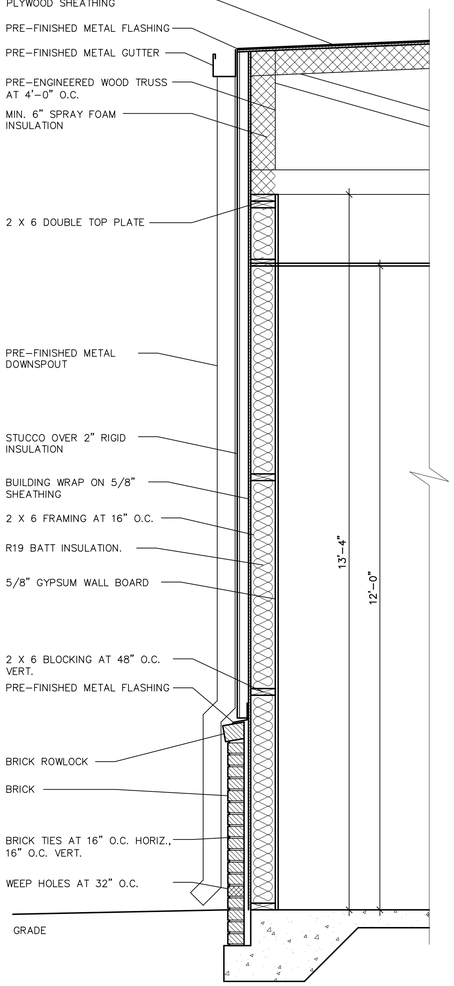
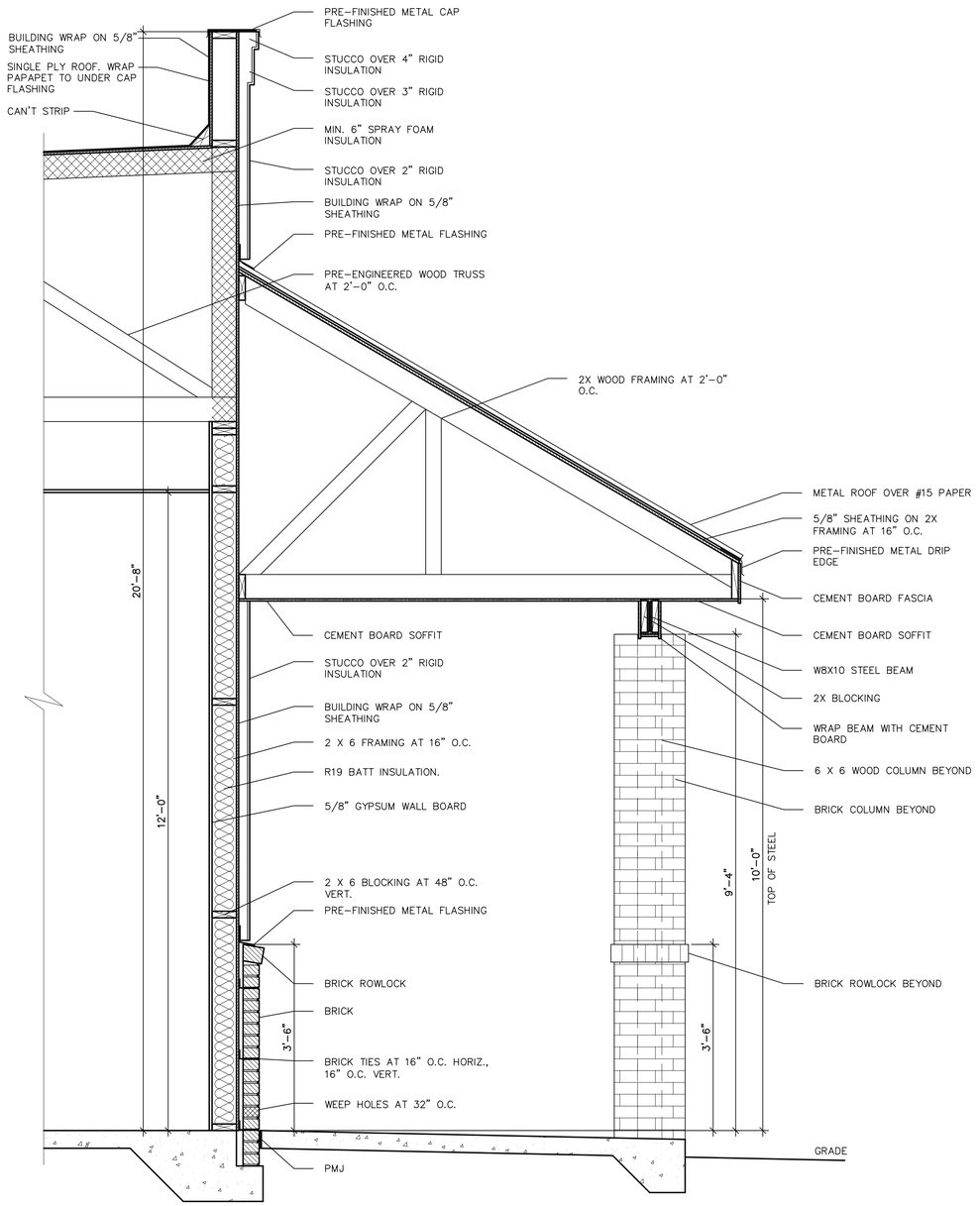
BUILDING SECTION

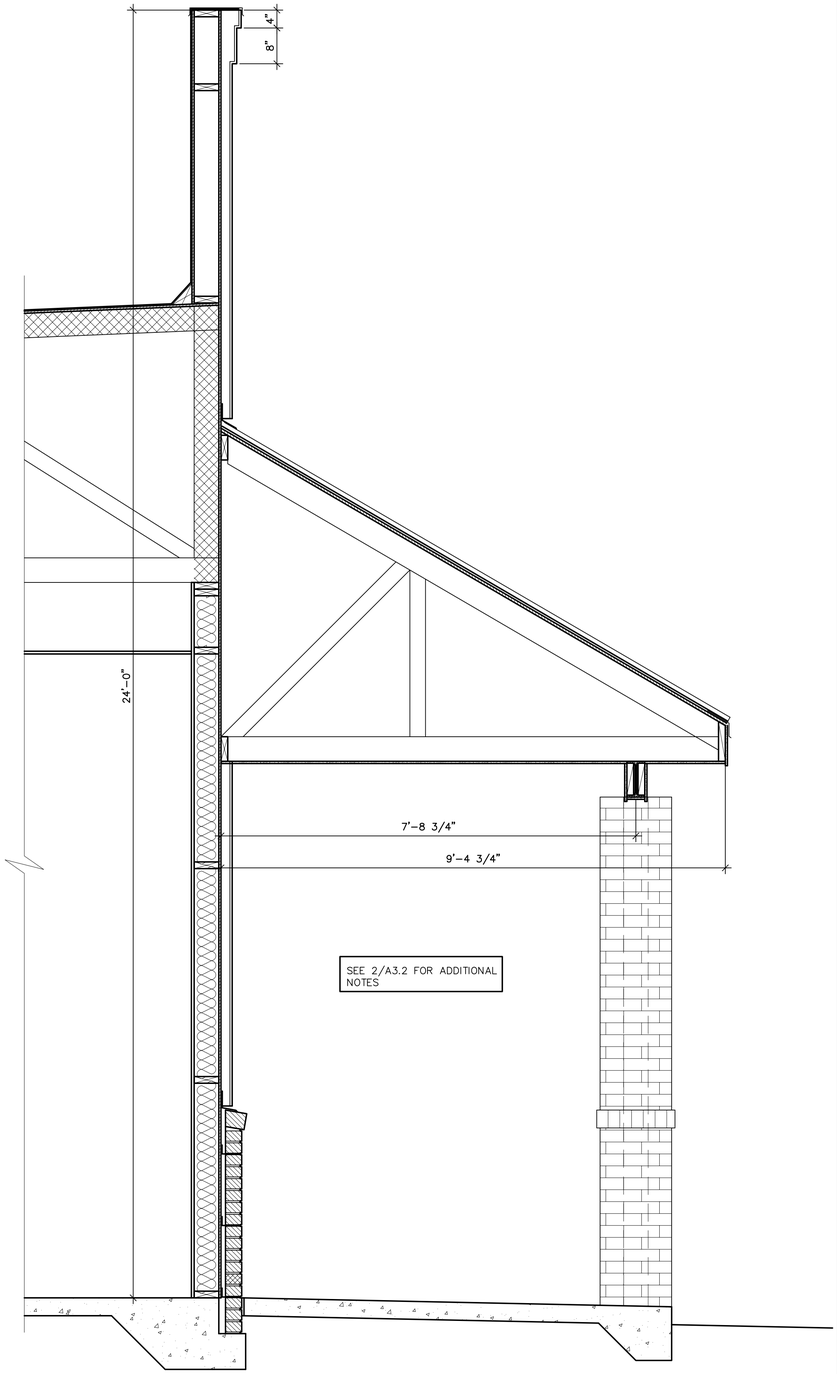
A3.1



1 WALL SECTION
3/4" = 1'-0"



2 WALL SECTION
3/4" = 1'-0"



3 WALL SECTION
3/4" = 1'-0"

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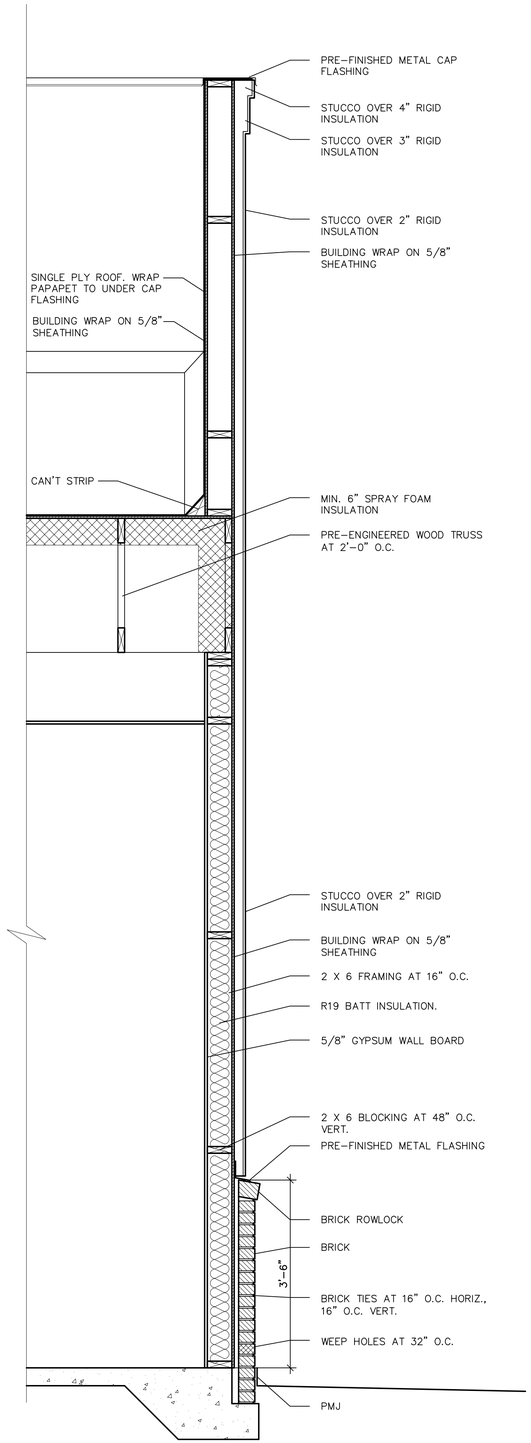
SCHEDULE OF REVISIONS

#	DATE

WALL SECTIONS

A3.2



1 WALL SECTION
3/4" = 1'-0"

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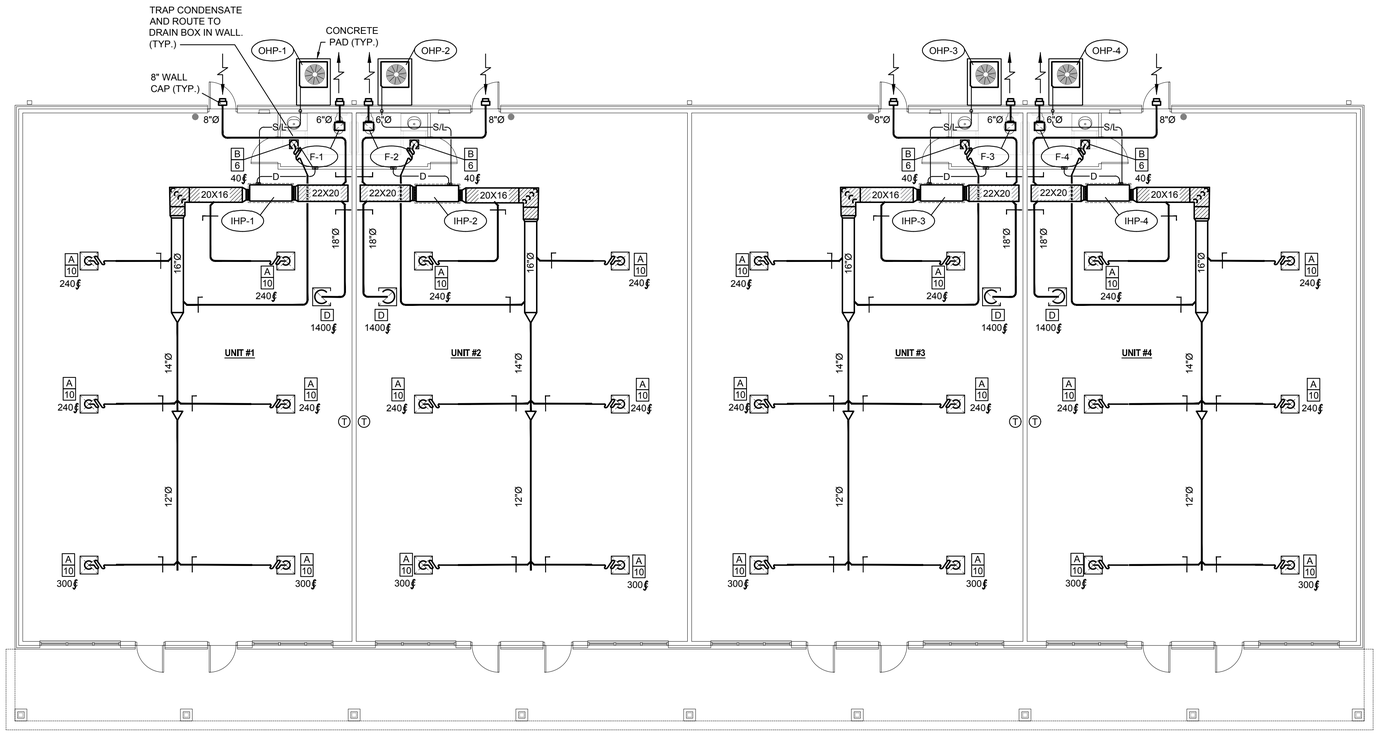
SCHEDULE OF REVISIONS

#	DATE

WALL SECTIONS AND DETAILS

A3.3



1 / M1.0 HVAC PLAN
SCALE: 1/8" = 1' - 0"

N

8' 0' 8' 16' 24' 32'
GRAPHIC SCALE IN FEET

DPR ARCHITECTURE
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GEORGIA REGISTERED NO. PE28656 PROFESSIONAL ENGINEER CAPRICE BAUMGRTL 12-4-24

BUILDING #2
COLDBROOK PLAZA
OLD RICHMOND ROAD
PORT WENTWORTH, GA

BID SET

HVAC PLAN

M1.0

2023-218

DELTA ENGINEERING
3604 Wheeler Rd. Suite C • Augusta, GA 30909
706-364-1770 • deltaeng.net

H.V.A.C. LEGEND

SYMBOL	DESCRIPTION
S/L	REFRIGERANT SUCTION / LIQUID
D	CONDENSATE DRAIN
T	THERMOSTAT 4'-0" A.F.
S	WALL SWITCH
	FLEXIBLE DUCT CONNECTION AT UNIT
	LINED DUCT (SIZE SHOWN IS METAL SIZE)
	FLEXIBLE DUCT CONNECTION
	SUPPLY DIFFUSER
	RETURN / EXHAUST GRILLE
FD	FIRE DAMPER
SD	SMOKE DAMPER
F/SD	FIRE / SMOKE DAMPER
AD	ACCESS DOOR
CRD	CEILING RADIATION DAMPER
	SQUARE ELBOW WITH TURNING VANES
MVD	MANUAL VOLUME DAMPER
M	MOTOR OPERATED DAMPER
A / 8	SEE AIR DEVICE SCHEDULE FOR TYPE NECK CONNECTION SIZE UNLESS NOTED OTHERWISE
C.F.M.	CUBIC FEET PER MINUTE
F-1	EQUIPMENT NUMBER - SEE SCHEDULES
	AIRFLOW DIRECTION
Ø	DIAMETER
	AIR EXTRACTOR
OBD	OPPOSED BLADE DAMPER
TYP.	TYPICAL
ENT.	ENTERING
LVG.	LEAVING
S.P.	STATIC PRESSURE
A.P.D.	AIR PRESSURE DROP
OA	OUTDOOR AIR

HVAC GENERAL NOTES

INSTALL DUCTWORK AND PIPING ABOVE CEILINGS WHERE POSSIBLE AND IN CHASES TO PROVIDE MAXIMUM POSSIBLE CLEARANCE'S FOR MAINTENANCE ACCESS. INSTALL PIPING AND DUCTWORK IN EQUIPMENT ROOMS PARALLEL OR PERPENDICULAR TO WALLS AND CEILINGS UNLESS SHOWN OTHERWISE.

ALL DUCTWORK AND PIPING SHALL BE CONCEALED UNLESS NOTED OTHERWISE.

COORDINATE THE INSTALLATION OF DUCTWORK AND PIPING WITH THAT OF OTHER TRADES TO PROVIDE THE BEST POSSIBLE ARRANGEMENT. REFER TO PLUMBING, ELECTRICAL, AND STRUCTURAL DRAWINGS AND SPRINKLER SHOP DRAWINGS. ARRANGE PIPING AND DUCTWORK TO AVOID CONFLICTS WITH OTHER BUILDING TRADES.

UNLESS DIMENSIONED, PIPING, DUCTWORK, AND EQUIPMENT ARE SHOWN IN APPROXIMATE LOCATIONS. EXACT CONFIGURATION SHALL BE DETERMINED IN THE FIELD TO COORDINATE WITH OTHER TRADES AND TO ALLOW FOR A MINIMUM NUMBER OF OFFSETS AS POSSIBLE WHILE ALLOWING FOR ADEQUATE MAINTENANCE ACCESS.

FURNISH FLEXIBLE DUCT CONNECTIONS TO ALL AIR HANDLING EQUIPMENT.

FURNISH FLANGED OR UNION CONNECTIONS IN PIPING AT ALL EQUIPMENT AND CONTROL VALVES, AND AS REQUIRED FOR SERVICE.

EXACT LOCATION OF AIR DEVICES SHALL BE DETERMINED IN THE FIELD. COORDINATE WITH ARCHITECTURAL REQUIREMENTS AND LIGHTING. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND ELECTRICAL PLANS FOR LIGHT LOCATIONS. AIR DEVICE LOCATIONS SHALL BE INSTALLED WITH A UNIFORM APPEARANCE AND SHALL BE SYMMETRICAL.

DUCT ACCESS DOORS SHALL BE FURNISHED AT ALL FIRE AND SMOKE DAMPERS, DUCT MOUNTED COILS, AND AT ALL DUCT MOUNTED CONTROL DEVICES.

SLOPE DRAIN LINE TOWARDS DRAIN WITH A MINIMUM SLOPE OF 1/4" PER FOOT.

THERMOSTAT LOCATIONS SHALL BE A MINIMUM OF 8" AWAY FROM DOOR FRAMES. COORDINATE LOCATION OF THERMOSTATS WITH LIGHT SWITCHES AND OTHER WALL DEVICES FOR SYMMETRY. MOUNT AT 4'-0" A.F. UNLESS NOTED OTHERWISE.

AIR DEVICE SCHEDULE

MARK	TYPE	NECK SIZE (1)	FINISH	OPPOSED BLADE DAMPER	TITUS MODEL NUMBER	NOTES
A / 10	SQUARE CEILING DIFFUSER	10"Ø	MANUFACTURERS STANDARD WHITE	YES	OMNI / 24"X24" FACE	(2)
B / 6	SQUARE CEILING DIFFUSER	6"Ø	MANUFACTURERS STANDARD WHITE	YES	OMNI / 12"X12" FACE	(2)
D	EGG CRATE RETURN / EXHAUST	22"X22"	MANUFACTURERS STANDARD WHITE	NO	50F / 24X24 PANEL WITH BORDER FRAME	(2)

(1) DUCT RUNOUT SHALL BE SAME SIZE AS NECK SIZE UNLESS NOTED OTHERWISE.
(2) SEE ARCHITECTURAL PLANS FOR CEILING TYPE. FURNISH LAY-IN TYPE FOR T-BAR CEILINGS AND SURFACE TYPE FOR ALL OTHER CEILINGS.

FAN SCHEDULE

ITEM	LOCATION	C.F.M.	EXT. S.P. (IN. WC)	WATTS	R.P.M.	SONES	GREENHECK MODEL NO.	ELECTRICAL DATA (3) VOLTS	ELECTRICAL DATA (3) PHASE	NOTES
F-1	TOILET	80	0.5"	30	777	2.5	SP-A200	115	1Ø	(1)(2)
F-2	TOILET	80	0.5"	30	777	2.5	SP-A200	115	1Ø	(1)(2)
F-3	TOILET	80	0.5"	30	777	2.5	SP-A200	115	1Ø	(1)(2)
F-4	TOILET	80	0.5"	30	777	2.5	SP-A200	115	1Ø	(1)(2)

(1) FURNISH BACKDRAFT DAMPER, HANGING BRACKETS, METAL CEILING GRILLE, SPEED CONTROLLER, AND DISCONNECT MEANS.
(2) SWITCH WITH ROOM LIGHTS. FURNISH AUXILIARY CONTACTS AS REQUIRED.
(3) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL PLANS & CONTRACTOR BEFORE ORDERING EQUIPMENT. NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES FOUND.

INDOOR HEAT PUMP SCHEDULE

ITEM	SUPPLY C.F.M.	EXT. S.P. (IN. W.C.)	O.A. C.F.M.	FAN HP.	DRIVE	COOLING CAP. BTUH (1) SENSIBLE	COOLING CAP. BTUH (1) TOTAL	AUX. HEAT (2) K.W.	AUX. HEAT (2) STGS.	ELECTRICAL DATA (3) VOLTAGE	ELECTRICAL DATA (3) PHASE	ELECTRICAL DATA (3) M.C.A.	ELECTRICAL DATA (3) M.O.C.P.	CARRIER MODEL NO.	NOTES
IHP-1	1520	0.5	200	3/4	DIRECT	33,120	44,530	9	1	208	1	47.4	50	FT4BNXC48	(4)
IHP-2	1520	0.5	200	3/4	DIRECT	33,120	44,530	9	1	208	1	47.4	50	FT4BNXC48	(4)
IHP-3	1520	0.5	200	3/4	DIRECT	33,120	44,530	9	1	208	1	47.4	50	FT4BNXC48	(4)
IHP-4	1520	0.5	200	3/4	DIRECT	33,120	44,530	9	1	208	1	47.4	50	FT4BNXC48	(4)

(1) RATINGS IN ACCORDANCE WITH A.R.I. STANDARD 240.
(2) HEATER SIZED AT 208 VOLT. COORDINATE WITH ELECTRICAL PLANS.
(3) ELECTRICAL DATA PROVIDED IS BASED ON EQUIPMENT SELECTED AS BASIS OF DESIGN. VERIFY ELECTRICAL REQUIREMENTS WITH ELECTRICAL PLANS AND/OR CONTRACTOR BEFORE ORDERING EQUIPMENT. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ELECTRICAL DATA IF OTHER MANUFACTURERS ARE FURNISHED.
(4) FURNISH TWO STAGE COOLING.

OUTDOOR HEAT PUMP SCHEDULE

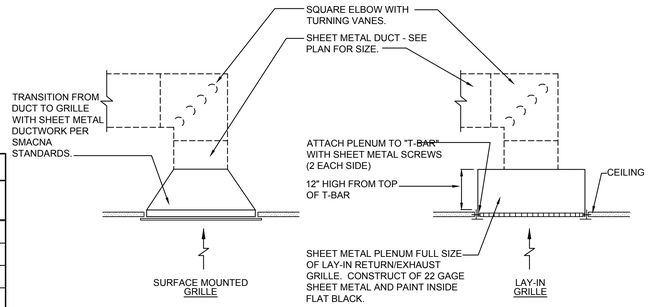
ITEM	COOLING CAPACITY (1) BTUH	SEER2 MIN.	HEATING CAP. M.B.H.(1) HI	HEATING CAP. M.B.H.(1) LO	HSPF2	C.O.P. (1) HI	C.O.P. (1) LO	ELECTRICAL DATA (2) VOLTAGE	ELECTRICAL DATA (2) PHASE	ELECTRICAL DATA (2) M.C.A.	ELECTRICAL DATA (2) M.O.C.P.	CARRIER MODEL NO.
OHP-1	44,530	16.5	47.6	29.3	8.1	3.62	2.76	208/230	1	33.5	50	25TPB748 (3)
OHP-2	44,530	16.5	47.6	29.3	8.1	3.62	2.76	208/230	1	33.5	50	25TPB748 (3)
OHP-3	44,530	16.5	47.6	29.3	8.1	3.62	2.76	208/230	1	33.5	50	25TPB748 (3)
OHP-4	44,530	16.5	47.6	29.3	8.1	3.62	2.76	208/230	1	33.5	50	25TPB748 (3)

(1) RATINGS IN ACCORDANCE WITH A.R.I. STANDARD 240.
(2) ELECTRICAL DATA PROVIDED IS BASED ON EQUIPMENT SELECTED AS BASIS OF DESIGN. VERIFY ELECTRICAL REQUIREMENTS WITH ELECTRICAL PLANS AND/OR CONTRACTOR BEFORE ORDERING EQUIPMENT. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ELECTRICAL DATA IF OTHER MANUFACTURERS ARE PROVIDED.
(3) FURNISH TWO STAGE COOLING.

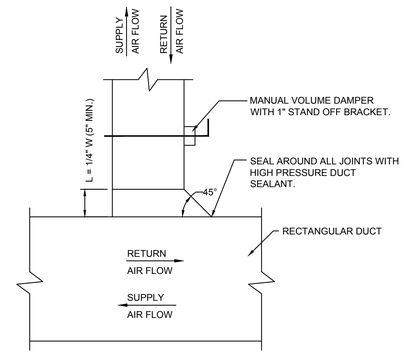
REFRIGERATION PIPE SCHEDULE

ITEM	SUCTION LINE O.D. (1)	LIQUID LINE O.D.(1)
IHP-1/OHP-1	7/8"	3/8"
IHP-2/OHP-2	7/8"	3/8"
IHP-3/OHP-3	7/8"	3/8"
IHP-4/OHP-4	7/8"	3/8"

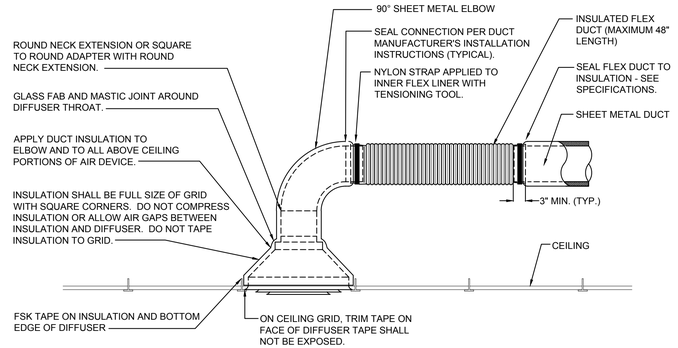
(1) REFRIGERANT PIPE SIZES INDICATED ARE FOR ESTIMATING PURPOSES ONLY. EXACT SIZES AND ACCESSORIES REQUIRED SHALL BE DETERMINED BY EQUIPMENT MANUFACTURER FROM FIELD OBTAINED DIMENSIONS.



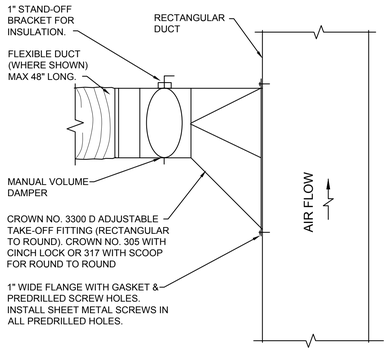
1 / M2.0 EXHAUST/RETURN GRILLE CONNECTION DETAILS
SCALE: NONE



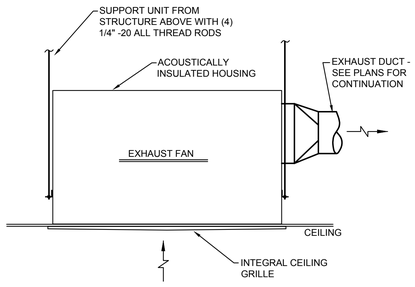
2 / M2.0 RECTANGULAR TAKE-OFF DETAIL FOR SUPPLY AND RETURN DUCTWORK
SCALE: NONE



3 / M2.0 ROUND DUCT CONNECTION DETAIL
SCALE: NONE



4 / M2.0 SUPPLY DUCT TAKEOFF FITTING DETAIL
SCALE: NONE



5 / M2.0 CEILING FAN DETAIL
SCALE: NONE

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BUILDING #2
COLDBROOK PLAZA
OLD RICHMOND ROAD
PORT WENTWORTH, GA

BID SET

HVAC NOTES, LEGEND, SCHEDULES, & DETAILS

M2.0

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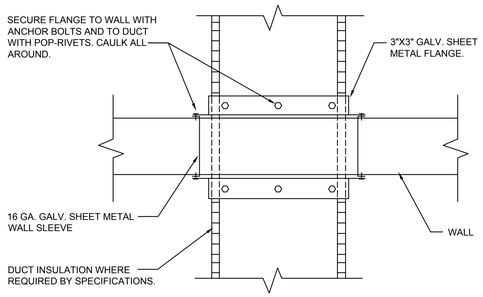
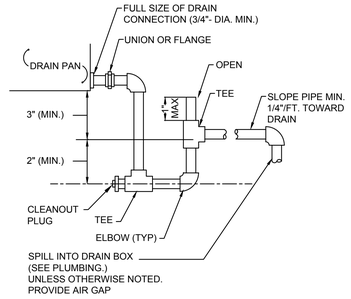
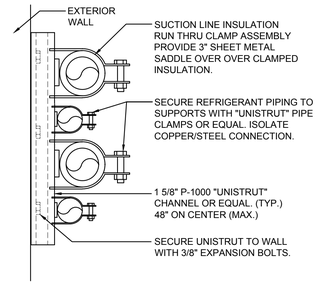


1 M2.1 DUCT SLEEVE DETAIL
SCALE: NONE

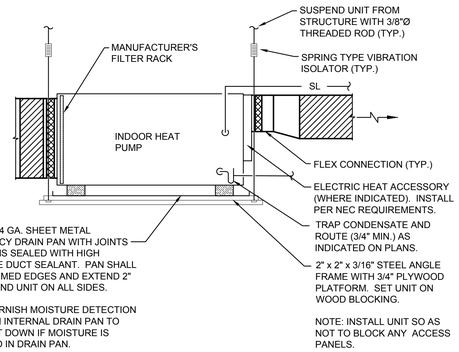


2 M2.1 CONDENSATE DRAIN DETAIL
SCALE: NONE



EXTERIOR PIPING WALL SUPPORT DETAIL

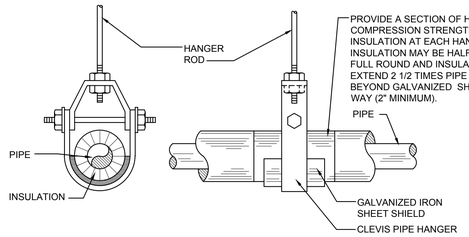
3 M2.1
SCALE: NONE



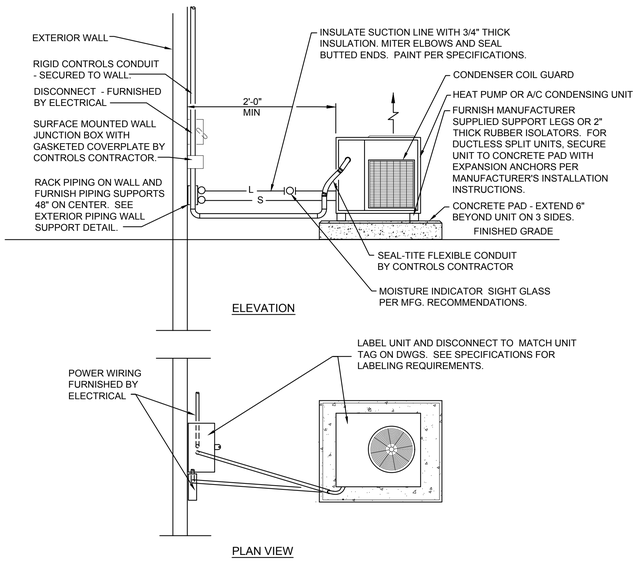
NOTE: FURNISH MOISTURE DETECTION SWITCH IN INTERNAL DRAIN PAN TO SHUT UNIT DOWN IF MOISTURE IS DETECTED IN DRAIN PAN.

NOTE: INSTALL UNIT SO AS NOT TO BLOCK ANY ACCESS PANELS.

6 M-2.1 INDOOR HEAT PUMP DETAIL
SCALE: NONE



5 M2.1 PIPE HANGER DETAILS
SCALE: NONE



EXTERIOR HVAC UNIT DETAIL

4 M2.1
SCALE: NONE

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HVAC DETAILS

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H.V.A.C. SPECIFICATIONS

GENERAL:

A. Entire system shall be installed to meet all applicable Local, State and National Codes, current requirements of NFPA, State of Georgia Heating and Air Conditioning Code and National Electric Code.

B. HVAC Subcontractor shall have a current Class II Conditioned Air Contractors License for the state in which the project is being constructed.

C. These specifications and all accompanying HVAC drawings are intended to provide for all labor, materials, and equipment necessary for the installation of a complete and functioning HVAC system.

D. All equipment shall be installed in accordance with the manufacturer's written instructions. Installing contractor shall furnish fully functioning systems.

E. The accompanying drawings are schematic only and are not intended to show all fittings, transitions, connections, offsets, etc. unless specifically shown. Install work as closely as possible to conform to the structural conditions, equipment, and work of other trades and the intent of the drawings, without addition cost to the owner.

F. Drawings shall not be scaled. Refer to architectural drawings for dimensions. Refer to drawings of other trades and coordinate all equipment be installed in accordance with manufacturer's installation instructions.

G. Existing work is not necessarily installed as shown on the plans. Contractor is responsible for verifying actual job site conditions prior to ordering equipment and fabricating duct. Any discrepancies found shall be reported to the Owner/Engineer.

H. Furnish 3000 psi 6-inch-thick concrete pad for equipment where designated on the plan. Pads shall be reinforced with 6" x 6" 1010 wire and shall have chamfered edges. Concrete pads shall extend 6" beyond all sides of unit.

I. All equipment shall be labeled with black plastic engraved equipment tags with minimum 1" lettering.

J. Furnish a digital copy of Operating and Maintenance Instructions on each piece of HVAC equipment at project closeout.

K. Furnish formal training to familiarize the Owner in the operation and maintenance of all the HVAC Systems including controls.

SHOP DRAWINGS:

A. Submit pdf set of Shop Drawings for approval of all HVAC equipment, accessories, insulation materials, and controls to be used on this project. Shop drawings shall be submitted before any materials or equipment incorporated in this work has been ordered. Shop drawings shall include the name and address of the manufacturer with items to be furnished and capacities and characteristics clearly marked.

B. Contractor shall obtain written approval from the engineer/ architect for the use of substitute materials claimed as equal to those specified 10 days prior to the bid date.

C. Equipment of greater or larger power, dimensions, capacities, and ratings may be furnished provided such proposed equipment is approved in writing and connecting mechanical and electrical services, circuit breakers, conduit, motors, bases, and equipment spaces are increased. No additional costs will be approved for these increases, if larger equipment is approved. If minimum energy ratings or efficiencies of the equipment are specified, the equipment must meet the design requirements and commissioning requirements.

D. The equipment listed on the Drawings is considered basis of design equipment and has been used for the physical arrangement of the mechanical systems. When other equipment listed in the specifications as acceptable, equal or equipment which has received "prior approval" is used, it shall be the Contractor's responsibility to provide structural, ductwork, electrical, service clearances, or other changes required to accommodate the substituted equipment. Changes to use non basis of design equipment shall be made at no additional cost to the Owner. Submit a list of required changes along with all prior approval requests and shop drawing submittals.

E. Approval of shop drawings and or submitted data shall not relieve the contractor of the responsibility to comply with the requirements and intent of the plans and specifications with regard to dimensions, capacities, quantities, performance characteristics, etc.

ELECTRICAL:

A. All line and low voltage control wiring shall be furnished by the HVAC Contractor. Provide complete wiring diagrams and all switches, starters, controls, relays, etc. necessary for a complete system. Run all wiring in EMT raceways.

B. Voltage and phase of mechanical equipment requiring power shall be designated by the Owner. Model numbers listed in mechanical equipment schedule shall not be construed to indicate electrical characteristics.

C. Piping, equipment, and other mechanical installations shall not be located within 42" of the front or 36" of the side of any electrical switchboards, panelboards, power panels, motor control centers, electrical transformers or similar electrical equipment. Piping and ductwork shall not pass through or above electrical equipment rooms except as required to serve those rooms.

DUCTWORK:

A. Low Pressure, Metal: Fabricate of galvanized steel as per SMACNA Manual for HVAC Duct Construction Standards, tables 1-3 through 1-19 including associated details. Use water based joint and seam sealant, resistant to UV light when cured, UL 723 listed, and complying with NFPA requirements for class 1 ducts to seal joints. Duct tape is not an acceptable product. Seal duct in accordance with ASHRAE standard 90.1.

B. Low Pressure round duct shall be rated for 1 inch positive pressure per SMACNA (snap-lock ductwork is acceptable).

C. All round and oval medium pressure duct shall be machine made, spiral, Uniseal ducts as manufactured by United Sheet Metal Co., Semco, Dixie or R.V. Money. Branch take-off fittings shall be conical tee connections unless otherwise indicated. Pipe-to-pipe joints shall be sleeve couplings. Joints shall be sealed with United Spiral EC-800, M.E.I. 4441, Childers CP-72 or Foster 30-02 high pressure duct sealer. Duct shall be rated for 10-inch positive and 2-inch negative pressure.

D. Insulated flexible round duct: Shall be Flexmaster Type 3M or equal products by Thermoflex, Cleveflex or Atco. Reinforced with steel wire helix encapsulated in the inner liner with silver mylar, glass reinforced outer jacket. Rated for 10" wg, positive pressure. Minimum R value = 6.0. Met UL 181 Class 1 air duct requirements. Flexible duct shall not exceed 4 feet in length and shall be supported 3 feet maximum on center with 3" wide by 26 gauge galvanized hangers. Duct shall be secured to branch ducts and outlets with stainless steel worm drive strap or nylon self-locking strap around the inner liner only.

E. All ductwork shall be supported in accordance with SMACNA Standards.

DUCT ACCESSORIES:

A. Turning Vanes: Use single thick vanes in square elbows. Fabricate according to SMACNA HVAC Duct Construction Standards, Figures 2-2 through 2-7.

B. Manual Dampers: For rectangular duct: Opposed blade, constructed with galvanized gauge steel blades and equal to SMACNA DCS Fig. 2-15. End of damper operating rod shall be square to accommodate damper operator. Manual dampers 12" or smaller in height may be single blade type equal to SMACNA DCS Fig 2-14 constructed of galvanized sheet metal.

C. Round damper shall be SMACNA DCS Fig 2-14 with blade gauge as follows: 8" and smaller = 22 gauge, 9" - 12" = 20 gauge, 13" and larger = 18 gauge.

D. Access Doors: As per SMACNA Fig. 2-12.

E. Grille and register connections: As per SMACNA Fig. 2-16.

F. Fire dampers shall be curtain type and dynamically rated, U.L. Classified for 1-1/2 or 3 hour (as indicated on architectural) fire resistance.

PIPING:

A. Refrigerant piping shall be ACR nitrogen charged tubing with joints made with Sil-fos or equal high temperature (1200 degrees F.) brazing compound. Bleed dry nitrogen through piping during brazing process. After satisfactory leak test, piping and system shall be evacuated and charged in accordance with the manufacturer's printed instructions.

B. Condensate drain piping: Type "L" drawn-temper copper tubing with soldered joints.

INSULATION:

A. Ductwork: Insulate lined and unlined supply, outdoor air, and return ductwork within building envelope with 3/4 lb. 2" thick fiberglass blanket insulation with FSK jacket. (Use 3" insulation for duct outside of building envelope) Lap all joints 2" minimum, staple 4" o.c. and seal with vapor barrier adhesive reinforced with fiber glass mesh ("glas-fab"). Use Stik-clips 24" on center on bottom of 30" wide and larger ducts. Insulate top of all air device surfaces.

B. Refrigerant Pipe: Insulate with 3/4" thick flexible elastomeric insulation. Seal all joints with adhesive. Slip whole sections of insulation on piping before pipe joints are made. Miter all elbows. Paint outdoor insulation two coats of manufacturer's recommended coating.

C. Refrigerant Piping used in variable refrigerant flow systems: Indoor for all pipe sizes insulation shall be ¾" thick flexible Elastomeric. Outdoor piping insulation shall be 1 inch thick flexible elastomeric.

D. Duct Liner: 1 1/2 lbs. density, 1" thick with surface coated to prevent glass fibers from getting into airstream. Flame spread rating less than 25 and smoke spread rating less than 50. Adhere liner and cover entire surface with thick coat of adhesive that complies with NFPA 90A and ASTM C916. Fasten liner with weld pins 12" o.c. in accordance with SMACNA Duct Liner Application Standard.

E. Air conditioning Condensate Piping: 3/8" flexible elastomeric insulation for interior applications.

HANGERS:

A. Support pipe from structure above with Grinnell CT-99 hanger, all thread rod and Fig. 86 C-clamp. Provide supplementary steel for upper attachment. Hangers shall fit around insulated pipe and shall have 24-gauge galvanized sheet metal saddle.

TESTS:

A. Refrigerant Piping: Pressure test with dry nitrogen to 200 psig in accordance with ASME B31.5, Chapter VI. Perform final tests at 27-psig vacuum and 200 psig using halide torch or electronic leak detector. Test to no leakage.

B. Heat Pump Units: Record all motor and heater nameplate amps and running amps during Heating and Cooling cycle (below 60 degrees F. cooling). Complete manufacturer's installation and startup checks. Furnish startup sheets to owner at project closeout.

C. Air Side: Record air quantities at supply outlets, return grilles, exhaust grilles, and outside air duct. All airflow quantities shall be balanced to be within + or - 10% of design air quantity. Test and balance shall be performed by an AABC certified agent. Submit reports on AABC forms to engineer to review.

SPLIT SYSTEM HEAT PUMP:

A. Unit shall be of size, type and capacity as indicated on the Drawings and shall be manufactured by Carrier. Equal units by Lennox or Trane will be acceptable.

B. The following accessories shall be furnished: Condenser Coil Guard, 5-minute Anti-Recycle Timer, Hard Start Kit for Single Phase Units, Crankcase Heater, Outdoor Thermostat for each Auxiliary Heat Stage, Defrost Thermostat for Indoor Coil, Low Ambient Controls, Outdoor air thermostat to prevent resistant heat from energizing above 45 degrees F.

C. Auxiliary electric heaters shall be of size and capacity as indicated on the Drawings and meet the requirements of the National Electric Code and Underwriters Laboratories.

EXHAUST FANS:

A. Exhaust fans shall be of size, type and capacity as shown on the drawings and shall be manufactured by Greenheck. Equal products by Ilg, Acme, Penn, Jenn-Air or Loren Cook are acceptable.

B. Ceiling Mounted: shall be furnished with speed controller, disconnect switch, ceiling grille.

CONTROLS:

A. Installation shall be in accordance with HVAC equipment manufacturer's wiring diagrams. Control components shall form a fully functional system.

B. HVAC unit thermostats shall be manufacturer's standard electronic 7-day programmable model having an Off-Em-Ht.-Heat-Auto-Cool System switch and an Auto-On Fan switch. Provide multi-stage heating and cooling thermostat where controlled unit has multi-stage capability. Outdoor thermostat shall prevent strip heat from being energized above 45 degrees F. (Emergency heat position not required for non-heat pump unit.) Furnish unit with the following features: Override function, Proportional plus integral control, Automatic changeover, and Keypad lockout.

C. Sequence of Operation:

Heat pump units: Units shall be controlled by programmable heat pump thermostats. The compressor, heat/cool reversing valve and supply fan shall energize in heating or cooling mode as required to satisfy the thermostat set point. When the compressor is unable to meet the heating requirements, the auxiliary strip heat shall energize. When outdoor air temperature is above 45ºF (adjustable), resistance heat shall not be energized. Occupied and unoccupied set points shall be coordinated with the owner.

Fans: Refer to fan schedule. Where fans are indicated to be interlocked with the room lights furnish starters/contactors as required for control operation.

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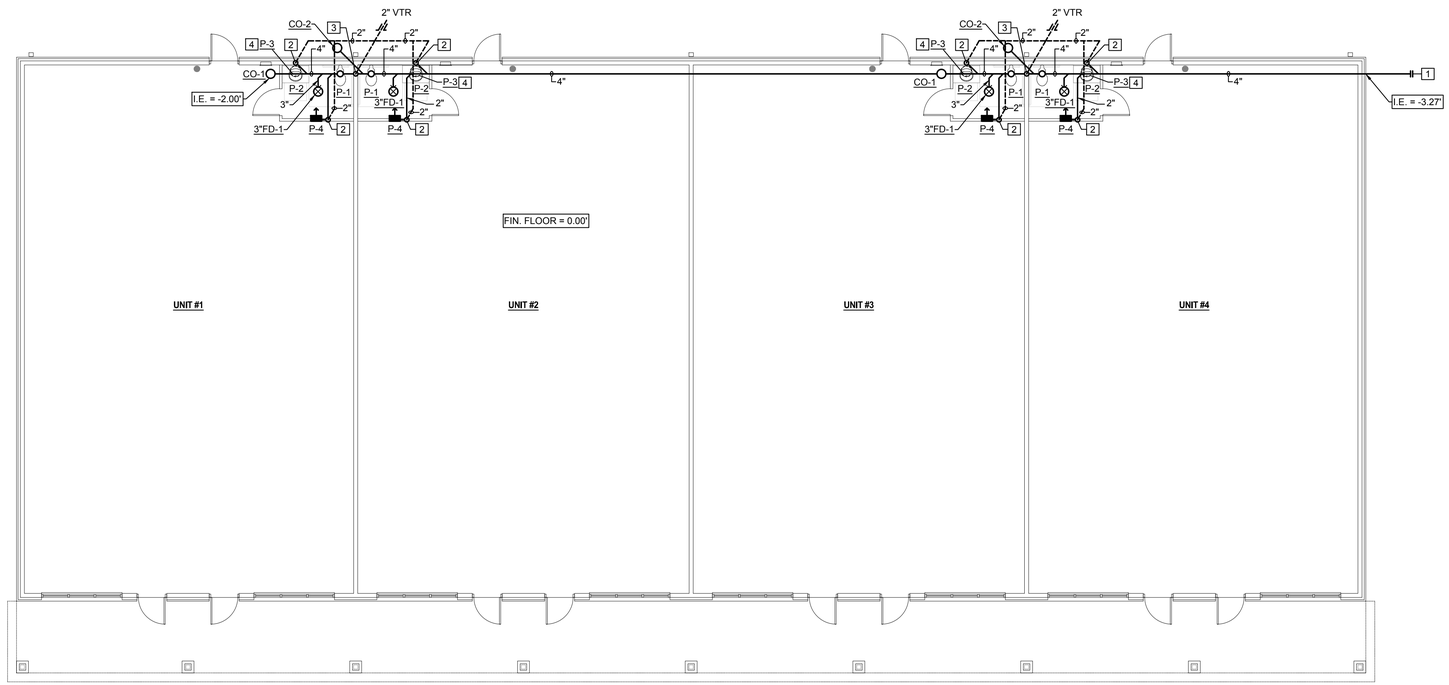
HVAC SPECIFICATIONS

M3.0



KEY NOTES - THIS SHEET

1. EXTEND TO 5'-0" BEYOND BUILDING AND PROVIDE TEMPORARY CAP. CONTINUATION BY OTHERS.
2. 2" WASTE, 2" VENT
3. 2" VTR
4. WATER HEATER LOCATED ON PLATFORM ABOVE LAVATORY. SEE DETAIL 10/P3.0.

NOTE: ALL VENTS SHALL BE EXTENDED THRU ROOF AND SHALL MAINTAIN 10'-0" CLEARANCE FROM FRESH AIR INTAKES. (TYPICAL)

1 / P1.0 PLUMBING WASTE & VENT PIPING PLAN

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

8' 0' 8' 16' 24' 32'

GRAPHIC SCALE IN FEET

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PLUMBING WASTE & VENT PIPING PLAN

P1.0

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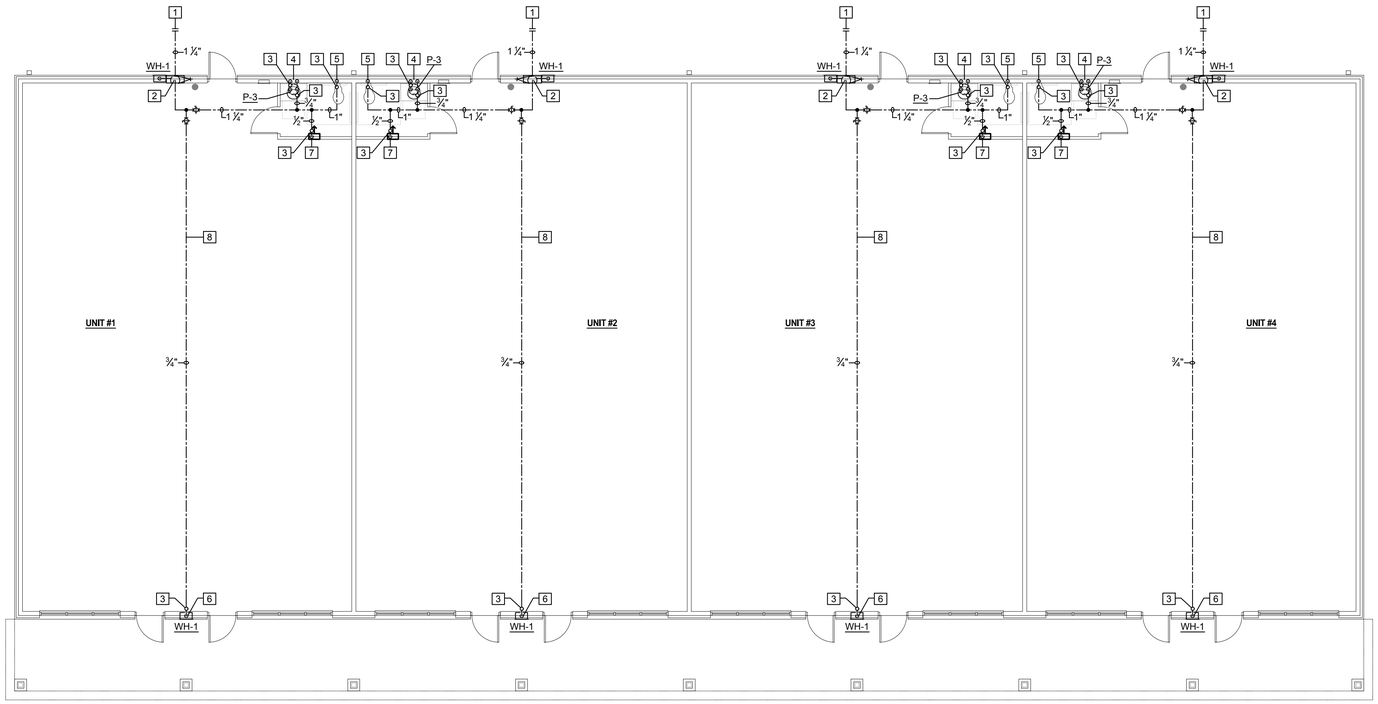

1 P2.0 PLUMBING WATER PIPING PLAN

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

8' 0' 8' 16' 24' 32'

GRAPHIC SCALE IN FEET

KEY NOTES - THIS SHEET

1. EXTEND TO 5'-0" BEYOND BUILDING AND PROVIDE TEMPORARY CAP. CONTINUATION BY OTHERS.
2. 1 ½" CW UP IN WALL BETWEEN STUDS. PROVIDE GATE VALVE ON RISER ± 12" A.F.F. WITH WALL HYDRANT (WH) 18" A.F.G. PROVIDE 12"X12" ACUDOR OR ENGINEER APPROVED EQUIVALENT ACCESS PANEL. COORDINATE LOCATION WITH ARCHITECT.SEE DETAIL 11/P3.0.
3. INDICATES NEW SHOCK ABSORBER (SA) "X". UNLESS NOTED ON DRAWINGS, SIZE SHALL BE "A". PROVIDE BALL VALVE ON CONNECTION TO SA. SEE DETAIL 7/P3.0.
4. ¾" CW DOWN. ½" CW DOWN TO AND ½" HW UP FROM WATER HEATER ON PLATFORM ABOVE LAVATORY. ½" CW, HW DOWN TO LAVATORY. SEE DETAIL 10/P3.0.
5. 1" CW TO WATER CLOSET.
6. ¾" CW DOWN TO WALL HYDRANT.
7. ½" CW DOWN TO CONDENSATE DRAIN BOX. SEE DETAIL 6/P3.0.
8. ROUTE PIPING HIGH ALONG STRUCTURE.

NOTE: PROVIDE NUMBERED VALVE TAG ON CEILING AT EACH VALVE LOCATION. (TYPICAL)

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ISSUE OR REVISION

PLUMBING WATER PIPING PLAN

P2.0

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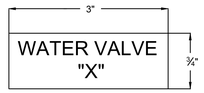
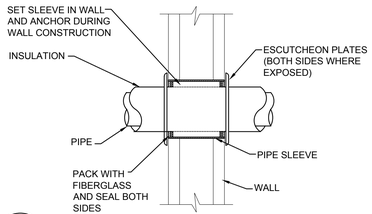
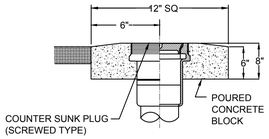


WHITE BAKELITE PLATE WITH BLACK ½" LETTERS. PROVIDE AT EACH VALVE LOCATION. CONTRACTOR SHALL INDICATE VALVE NUMBER AND TAG WITH LOCATIONS ON FINAL AS BUILT DOCUMENTS. TAG SHALL BE SECURED TO CEILING "T-BAR" WITH POP RIVETS.

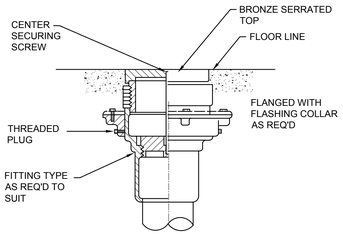
1 P3.0 VALVE TAG DETAIL
NOT TO SCALE



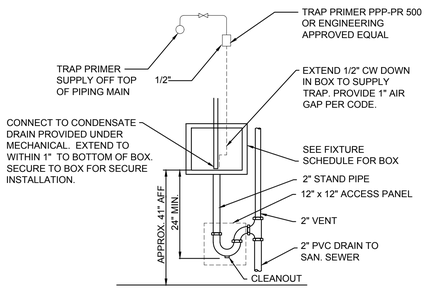
5 P3.0 PIPE SLEEVE THRU WALL DETAIL
NOT TO SCALE



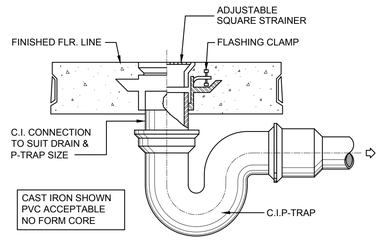
9 P3.0 EXTERIOR CLEANOUT DETAIL
NOT TO SCALE



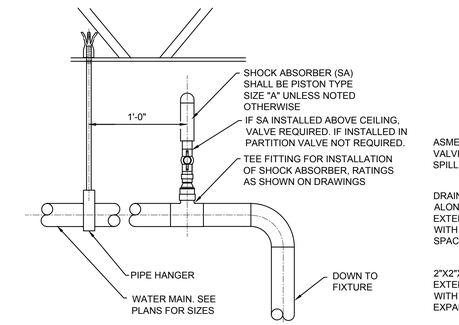
2 P3.0 INTERIOR CLEANOUT DETAIL
NOT TO SCALE



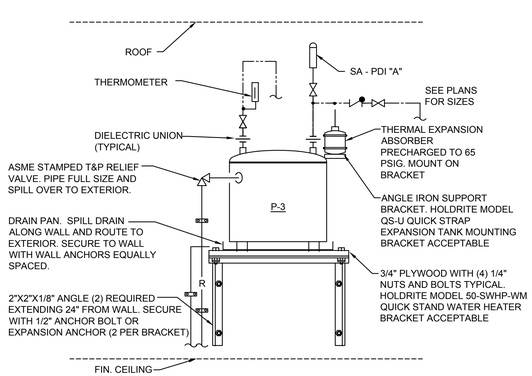
6 P3.0 CONDENSATE DRAIN BOX DETAIL
NOT TO SCALE



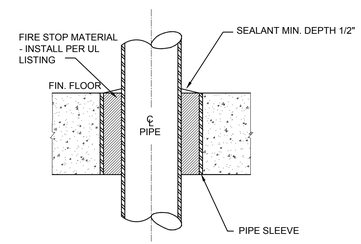
3 P3.0 TYPICAL FLOOR DRAIN DETAIL
NOT TO SCALE



7 P3.0 SHOCK ABSORBER DETAIL
NOT TO SCALE

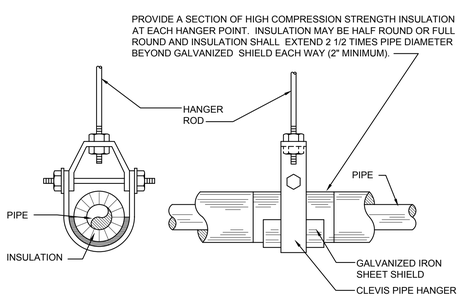


10 P3.0 PLATFORM WATER HEATER DETAIL
NOT TO SCALE

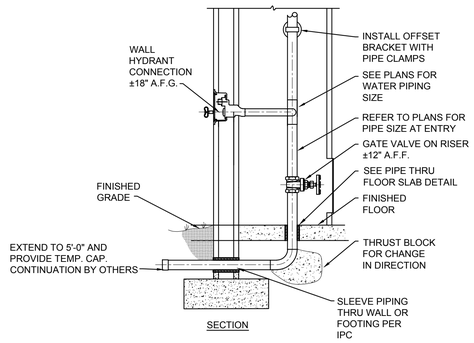


FIRE STOP MATERIAL NOT REQUIRED FOR PIPE SLAB ON GRADE.

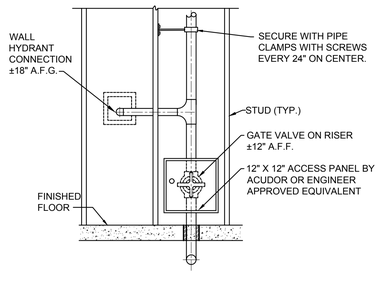
4 P3.0 PIPE THRU FLOOR SLAB DETAIL
NOT TO SCALE



8 P3.0 PIPE HANGER DETAILS
NOT TO SCALE FOR PIPE 2 1/2" AND SMALLER



SECTION



ELEVATION

11 P3.0 WATER RISER DETAIL
NOT TO SCALE

PLUMBING FIXTURE SCHEDULE

SYM	FIXTURE	PIPE SIZES (IN.) W	V	CW	HW	RIM HT/ MTG HT	MANUF.	MODEL	DESCRIPTION	NOTE
P-1	WATER CLOSET H/C	4	-	1	-	ADA	SLOAN	ST-2029-A	SLOAN 8111-1.28, 1.28 SENSOR FLUSHVALVE; CENTOCO 500CC ELONGATED SEAT	①
P-2	LAVATORY H/C (DROP IN)	2	2	1/2	1/2	ADA	SLOAN	SS-3002	SLOAN SF-2350 BATTERY SENSOR FAUCET; SUPPLIES, STOPS, WASTE	①②
P-3	WATER HEATER	-	-	1/2	1/2	-	A.O. SMITH	DEL-10	10 GALLON; 208V / 1ϕ, 3KW, UEF = N/A	
P-4	CONDENSATE DRAIN BOX	2	2	1/2	-	-	OATEY	37557	MODA; DRAIN FUNNEL, COVER PLATE	
FD-1	FLOOR DRAIN (GENERAL)	3	-	-	-	-	J.R. SMITH	2005L-Y-A06-NB	CAST IRON, NO HUB, SPEEDI-SET	④⑤
WH-1	WALL HYDRANT	-	-	3/4	-	12" INT 18" EXT	J.R. SMITH	5509QT-R		
CO-1	CLEANOUT INTERIOR	4	-	-	-	-	J.R. SMITH	4031	CAST IRON, SURFACE MEMBRANE CLAMP	③
CO-2	CLEANOUT EXTERIOR	4	-	-	-	-	J.R. SMITH	4291		

PLUMBING FIXTURE KEY NOTES:

1. MOUNT AT ADA HEIGHT. ADA SHALL CONFORM TO ACCESSIBILITY CODE. REFER TO CODE FOR GUIDANCE. WHERE CONFLICTS ARISE BETWEEN ARCHITECTURAL DRAWINGS AND MECHANICAL DRAWINGS, ARCHITECTURAL DRAWING SHALL GOVERN.
2. PROVIDE PROTECTIVE PIPE COVERS FOR ALL HANDICAP LAVATORIES
3. PROVIDE CARPET MARKERS FOR CARPETED AREAS
4. PROVIDE 7" STRAINER ON 3" DRAIN AND 9" STRAINER ON 4" DRAINS. PROVIDE SUFFIX "M" (SQUARE TOP) FOR QUARRY TILE AND CERAMIC TILE FLOORS AND SUFFIX "A" (ROUND TOP) FOR ALL OTHER FLOORS.
5. PROVIDE TRAP GUARDS ON ALL HUB DRAINS AND FLOOR DRAINS. IF APPROVED BY LOCAL AHJ. IF NOT APPROVED PROVIDE TRAP PRIMERS

GENERAL PLUMBING NOTES

1. EXACT LOCATIONS AND ROUGHING REQUIREMENTS FOR ALL FIXTURES AND EQUIPMENT SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS. LARGE SCALE ARCHITECTURAL DETAILS AND APPROVED MANUFACTURER'S SHOP DRAWINGS. PARTICULAR ATTENTION SHALL BE DIRECTED TO FIXTURES OR EQUIPMENT FURNISHED UNDER OTHER DIVISIONS.
2. INVERT ELEVATIONS SHOWN SHALL BE VERIFIED ON THE JOB BEFORE INSTALLING ANY NEW PIPE.
3. INSTALL TEST-TEES WHEN SANITARY SEWER SYSTEM IS TO BE TESTED IN SECTIONS.
4. PIPING IS SHOWN IN ITS GENERAL LOCATION (UNLESS DIMENSIONED). EXACT LOCATION SHALL BE DETERMINED BY JOB CONDITIONS. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF HI WORK WITH THAT OF OTHER TRADES AND ARRANGE PIPING TO CLEAR STRUCTURAL MEMBERS AND DUCTWORK. RISERS FOR FIXTURES, UNLESS OTHERWISE NOTED, SHALL BE CONCEALED IN WALLS OR PIPE CHASES.
5. MINIMUM SIZE WATER LINE FOR ANY TWO FIXTURES SHALL BE ¾". REFER TO PLUMBING FIXTURE SCHEDULE FOR INDIVIDUAL FIXTURE RUNOUT SIZES.
6. INSTALL UNDERGROUND WATER LINE(S) ABOVE SOIL AND WASTE LINE(S). WATER LINE SAME TRENCH WITH SOIL OR WASTE LINE SHALL BE INSTALLED ON AN UNDISTURBED EARTH LEDGE WITH BOTTOM OF WATER LINE 12" (MIN) ABOVE TOP OF SOIL OR WASTE LINE. IPC CODE REQUIREMENTS SHALL GOVERN FINAL INSTALLATION.
7. INSTALL ALL EXTERIOR WALL HYDRANTS 18" ABOVE FINISH GRADE (A.F.F.) EXCEPT AS NOTED OTHERWISE.
8. PROVIDE A MINIMUM COVER OF 24" FOR ALL LINES EXCEPT AS NOTED OTHERWISE ON CONTRACT DRAWINGS.
9. PROVIDE SLEEVES PER IPC REQUIREMENTS FOR PIPE PASSING THRU FLOOR, MASONRY WALLS AND FIRE OR SMOKE PARTITIONS. PACK ANNULAR SPACE BETWEEN PIPE WITH MATERIAL APPROVED IN U.L. BUILDING DIRECTORY OR AS DIRECTED BY IPC OR IBC REQUIREMENTS.
10. INSTALL INTERIOR HOSE BIBBS 20" ABOVE FINISHED FLOOR (A.F.F.) EXCEPT AS NOTED OTHERWISE. WHERE HOSE BIBBS ARE INSTALLED ADJACENT TO FIXTURES STOPS, INSTALL HOSE BIBBS AT SAME CENTERLINE ELEVATIONS AS FIXTURE STOPS.
11. REFER TO ARCHITECTURAL FINISH SCHEDULE AND ELEVATIONS FOR DETAILS OF FLOOR WHERE FLOOR DRAINS ARE TO BE INSTALLED.
12. IT SHALL BE CONTRACTORS RESPONSIBILITY TO COORDINATE THIS INSTALLATION WITH THAT OF OTHER TRADES TO ENSURE COMPLETE INSTALLATION. CONTRACTOR SHALL VERIFY ROUTING OF ALL PIPING AND ADJUST AS NECESSARY TO AVOID CONFLICTS WITH THAT OF OTHER TRADES AND OR STRUCTURAL MEMBERS.

PLUMBING LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
- - - - - - - - - - - -	VENT	VTR	VENT THRU ROOF
———————	WASTE OR SANITARY SEWER		BALL VALVE
—·—·—·—·—·—	COLD WATER		CHECK VALVE
—··—··—··—··—	HOT WATER		SHUTOFF VALVE
TYP.	TYPICAL	PDI "X"	SHOCK ABSORBER
U.O.N.	UNLESS OTHERWISE NOTED	CO	CLEANOUT
		FD	FLOOR DRAIN

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BUILDING #2
COLDBROOK PLAZA
OLD RICHMOND ROAD

BID SET

PLUMBING NOTES, LEGEND, & SCHEDULES

P3.0

2023-218

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PLUMBING SPECIFICATIONS:

GENERAL:

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS APPLY TO THIS SECTION

B. PLUMBING WORK SHALL BE PERFORMED AS OUTLINED BELOW

C. THESE SPECIFICATIONS AND ACCOMPANYING PLUMBING DRAWINGS ARE INTENDED TO PROVIDE FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE INSTALLATION COMPLETE OF ALL PLUMBING FIXTURES, EQUIPMENT, ROUGH-INS, WASTE VENT SYSTEMS, COLD WATER SYSTEMS, HOT WATER SYSTEMS AND ACCESSORIES INCLUDING NECESSARY APPARATUS, VALVES AND FITTINGS HEREINAFTER DESCRIBED OR CALLED FOR ON THE PLUMBING DRAWINGS ACCOMPANYING THESE SPECIFICATIONS. WHERE CONFLICTS ARISE BETWEEN ARCHITECTURAL DRAWINGS AND PLUMBING DRAWINGS, CONTRACTOR SHALL COORDINATE CORRECT CONFIGURATION AND ADJUST AS NECESSARY FOR COMPLIANT INSTALLATION.

D. ALL PLUMBING WORK SHALL BE INSTALLED WITH IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE LATEST ADDITION OR IN COMPLIANCE WITH AUTHORITY HAVING JURISDICTION REQUIREMENTS.

E. THE CONTRACTOR SHALL SECURE ALL REQUIRED PERMITS AND INSPECTION FEES NECESSARY FOR THIS WORK.

F. THE ACCOMPANYING DRAWINGS ARE SCHEMATIC ONLY AND ARE NOT INTENDED TO SHOW ALL FITTINGS, BOLTS, CONNECTIONS, OFFSETS, ETC., UNLESS SPECIFICALLY SHOWN. FOLLOW DRAWINGS AS CLOSELY AS POSSIBLE, PROVIDE ALL ADJUSTMENTS AS NECESSARY TO CONFORM TO THE STRUCTURAL CONDITIONS, EQUIPMENT, WORK OF OTHER TRADES AND THE INTENT OF THE DRAWINGS, WITHOUT COST TO THE OWNER. PLUMBING DRAWINGS SHOULD NOT BE SCALED. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO DRAWINGS OF OTHER TRADES AND COORDINATE. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

SCOPE OF WORK:

A. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL OF THE FOLLOWING WORK IN GENERAL AND PROVIDING A COMPLETE PLUMBING SYSTEM AS SHOWN ON THE PLANS. THE ITEMS IN GENERAL ARE TO BE AS FOLLOWS:

1. FURNISH AND INSTALL COMPLETE WASTE AND VENT SYSTEM WITH CONNECTIONS TO SERVICES AS SHOWN ON THE PLUMBING DRAWINGS AND HEREIN SPECIFIED.

2. FURNISH AND INSTALL HOT WATER SYSTEM COMPLETE WITH CONNECTIONS TO POINT AS SHOWN ON THE PLUMBING DRAWINGS AND HEREIN SPECIFIED.

3. FURNISH AND INSTALL COLD WATER SYSTEM COMPLETE WITH CONNECTIONS TO POINT AS SHOWN ON THE PLUMBING DRAWINGS AND HEREIN SPECIFIED.

CONNECTION TO EXISTING UTILITIES:

A. EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHALL NOT BE DETERMINED TO BE EXACT CONNECTION LOCATIONS. CONTRACTOR MUST VERIFY EXACT LOCATIONS, SIZES, INVERTS, AND CONDITION OF EXISTING UTILITIES PRIOR TO CONNECTIONS. FAILURE TO ACCURATELY LOCATE AND IDENTIFY EXISTING UTILITIES SHALL NOT INCUR ADDITIONAL COST FOR REPAIRS OR RECONNECTIONS OF NEW TO EXISTING UTILITIES.

LIST OF MATERIALS, FIXTURES, AND EQUIPMENT:

A. THE PLUMBING CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE ENGINEER/ ARCHITECT FOR THE USE OF SUBSTITUTE MATERIALS CLAIMED AS EQUAL TO THOSE SPECIFIED. SUCH APPROVAL MUST BE OBTAINED AS SOON AFTER CONTRACT AWARDS AS POSSIBLE AND BEFORE ANY MATERIALS ARE ORDERED. APPLICATIONS FOR APPROVAL SHALL BE MADE BY THE PLUMBING CONTRACTOR ONLY AND NO OTHER APPLICATIONS SHALL BE ACCEPTED. THE PLUMBING CONTRACTOR SHALL SUBMIT FOR APPROVAL WITHIN TEN (10) DAYS FOLLOWING AWARD OF CONTRACT AND WRITTEN NOTICE TO BEGIN THE WORK A COMPLETE LIST OF MATERIALS PROPOSED FOR THE JOB. ALL LIKE ITEMS SHALL BE BY ONE MANUFACTURER. NO FURTHER SUBSTITUTIONS SHALL BE ACCEPTED AFTER APPROVED BY ENGINEER / ARCHITECT. CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL COST ASSOCIATED WITH INSTALLATION OF UNAPPROVED FIXTURES AND REMOVAL AND REPLACEMENT OF SUCH AT NO COST TO OWNER.

B. THE PLUMBING CONTRACTOR SHALL SUBMIT AN ELECTRONIC SET OF SHOP DRAWINGS TO THE ARCHITECTS WITHIN 20 DAYS AFTER AWARD OF THE CONTRACT, AND BEFORE ANY MATERIALS, FIXTURES, AND EQUIPMENT TO BE INCORPORATED IN THE WORK HAS BEEN ORDERED. SHOP DRAWINGS SHALL INCLUDE THE NAME AND ADDRESS OF THE MANUFACTURER AND THEIR CATALOG NUMBERS AND TRADE NAMES CLEARLY MARKED. ALL ITEMS SHALL BE REFERENCED TO THE PLANS AND SPECIFICATIONS BY FIXTURE NUMBER. SUBMIT SHOP DRAWINGS AND / OR CATALOG DATA FOR THE FOLLOWING:

1. WASTE PIPING, FITTINGS AND COUPLINGS
2. WATER PIPING, FITTINGS AND EQUIPMENT
3. GATE VALVES, BALL VALVES, PLUG VALVES, BACK FLOW PREVENTERS
4. VENT CAPS
5. EMERGENCY DRAIN PANS
6. PIPING INSULATION
7. HANGER SUPPORTS AND HANGERS
8. FIXTURES

C. APPROVAL OF SHOP DRAWINGS AND / OR SUBMITTED DATA SHALL NOT RELIEVE THE PLUMBING CONTRACTOR OF THE RESPONSIBILITY TO COMPLY WITH THE REQUIREMENTS AND INTENT OF THE PLANS AND SPECIFICATIONS WITH REGARD TO DIMENSIONS, CAPACITIES, QUALITY, QUANTITY, PERFORMANCE CHARACTERISTICS, ETC. IF DATA SUBMITTED DEVIATES FROM THE CONTRACT DOCUMENTS, THE PLUMBING CONTRACTOR SHALL POINT OUT SUCH DEVIATIONS IN WRITING AND ALSO STATE REASONS FOR SAME.

D. FIXTURES:

1. WATER CLOSETS,URINALS, LAVATORIES, SINKS, MOP SINKS, FLUSH VALVES, AND FAUCETS SHALL BE ALL ONE MANUFACTURER AND SHALL BE EQUALS OF AMERICAN STANDARD, KOHLER SLOAN, ZURN, SYMMONS, ELKAY, DAYTON. ENGINEERING APPROVAL FOR OTHERS NOT LISTED SHALL BE REQUIRED.

2. WATER HEATERS, (ELECTRIC) SHALL BE A.O.SMITH, STATE, RHEEM, VAUGHN, BRADFORD WHITE, AMERICAN, AND HTP. GAS WATER HEATERS SHALL BE A.O. SMITH, INTELLIHOT, BRADFORD WHITE VAUGHN, PVI AND HTTP. ENGINEERING APPROVAL FOR OTHERS NOT LISTED SHALL BE REQUIRED.

WORKMANSHIP:

A. LAYOUT:

1. DRAWINGS INDICATE GENERAL LOCATIONS OF FIXTURES. EXACT LOCATIONS SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS.

2. FURNISH AND INSTALL ALL NECESSARY SLEEVES, INSERTS, BOLTS, ETC., FOR CONCRETE FLOOR SLABS, ROOF, WALLS, AND PARTITIONS. FAILURE TO INSTALL SUCH ITEMS IN TIME TO AVOID DELAYING THE GENERAL CONTRACTOR SHALL RESULT IN THE CONTRACTOR DOING ANY NECESSARY CUTTING AND REPAIRING AT HIS EXPENSE.

3. SLEEVES AS HEREINAFTER SPECIFIED SHALL BE INSTALLED ON ALL THROUGH THE FLOOR PIPING ABOVE SLAB ON GRADE EXCEPT WATER CLOSET ROUGH-INS. WATER CLOSET ROUGH-INS SHALL BE CAST IN PLACE. CORE DRILLING OF SLABS SHALL BE SEALED WITH APPROVED FIRE RETARDANT CAULKING AND SEALED WATERTIGHT.

4. ALL FIXTURES AND EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

B. DRAINAGE, WASTE, AND VENT PIPING:

1. SLOPE ALL LINES 2" AND SMALLER AT 1/4" / FOOT

2. SLOPE ALL LINES 3" AND LARGER AT 1/8" / FOOT

3. RUN ALL PIPING AS DIRECTLY AS POSSIBLE, AVOIDING UNNECESSARY BENDS AND TURNS SO AS NOT TO INTERFERE WITH PROPER INSTALLATION.

4. TAPPED TEES AND CROSSES WILL NOT BE PERMITTED. TAPPED SANITARY TEES AND CROSSES SHALL BE USED.

C. WATER SYSTEM:

1. CONCEAL WATER SUPPLY IN WALLS, BELOW FLOOR OR ABOVE CEILING EXCEPT WHERE EXPOSED FOR CONNECTIONS TO FIXTURES OR OTHERWISE INDICATED.

2. ALL WATER PIPING SHALL BE ROUTED WITH A MINIMUM CLEARANCE OF TEN (10) FEET FROM ANY ELECTRICAL SWITCHBOARDS, PANEL BOARDS OR TELEPHONE BACKBOARDS.

3. ALL SUPPLY TO FIXTURES SHALL HAVE INDIVIDUAL STOP VALVES

4. PROVIDE WATER HAMMER SHOCK ARRESTORS (PD) AS REQUIRED OR AS SHOWN TO PREVENT WATER HAMMER. ARRESTERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND AS DETAILED ON CONTRACT DRAWINGS. MANUFACTURERS OF URN, JOAN ,J.R. SMITH SHALL BE ACCEPTABLE. PROVIDE 12" X 12" ACCESS DOORS FOR ALL SHOCK ARRESTORS INSTALLED ABOVE HARD CEILINGS.

5. ALL EXPOSED PIPING TO FIXTURES SHALL BE CHROME PLATED.

6. INSULATE ALL WATER PIPING INSIDE BUILDING AND HEREINAFTER SPECIFIED.

D. INSULATION:

1. ALL PIPE INSULATION JOINTS SHALL BE SEALED TO MAINTAIN INTEGRITY OF THE VAPOR JACKET AND SHALL PASS THRU ALL SLEEVES UNBROKEN EXCEPT FOR FIRE STOPS.

2. PIPE INSULATION AT ALL FIRE SEPARATIONS SHALL BE BUTTED TIGHTLY TO THE FIREWALL OR TO THE FLOOR AFTER FIR STOP MATERIAL HAS BEEN INSTALLED.

CUTTING,PATCHING, AND CHASING:

A. ALL CUTTING AND PATCHING SHALL BE GENERAL CONDITIONS OF THE ARCHITECTURAL SPECIFICATIONS. PLUMBING CONTRACTOR SHALL CUT ALL FLOORS NECESSARY TO INSTALL ALL PIPING AND SHALL REPAIR FLOOR TO MATCH THAT OF EXISTING.

WASTE AND VENT SYSTEMS:

A. PIPING:

1. WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC-DWV SOLID WALL PIPING CONFORMING TO ASTM D-2665-68 AND C.S. 272-65 WITH NS SEAL. NO FOAM CORE PIPING WILL BE ACCEPTABLE.

2. WASTE PIPING SLEEVES SHALL BE SCHEDULE 40 PVC-DWV OR CAST IRON SOLID WALL AS IDENTIFIED AS ABOVE BUT SHALL BE ONE PIPE DIAMETER LARGER FILLED WITH FIRESTOP MATERIAL FOR FIRE WALLS.

B. FITTINGS:

1. FITTINGS FOR PVC-DWV PIPING SHALL BE PVC-DWV FITTINGS CONFORMING TO PIPING SPECIFICATIONS LISTED ABOVE.

C. JOINTS:

1. JOINTS FOR PVC-DWV PIPING SHALL BE MADE USING PIPING MANUFACTURERS APPROVED SOLVENT CEMENT.

2. ANY FLASHING OF PLUMBING VENTS IF USED SHALL BE PROVIDED BY THE GENERAL CONTRACTOR AND SHALL BE COORDINATED WITH SUCH.

HOT AND COLD WATER SYSTEMS

A. WATER PIPING:

1. WATER PIPING 4" AND SMALLER ABOVE GRADE INSIDE BUILDING SHALL BE TYPE "L" HARD COPPER CONFORMING ASTM B-88

B. FITTINGS:

1. FITTINGS FOR COPPER PIPING SHALL BE WROUGHT COPPER, SOLDER JOINT FITTINGS CONFORMING TO ANSI B 16.22

C. JOINTS:

1. ALL COPPER PIPING JOINTS, 1 1/4" AND SMALLER SHALL BE MADE USING LEAD FREE SOLDER WITH A MINIMUM MELTING POINT OF 410 DEGREES FAHRENHEIT.

2. ALL COPPER PIPING JOINTS, 1 1/2" AND LAGER SHALL BE MADE USING SIL-PHOS-COPPER SILVER ALLOY MATERIAL WITH A MINIMUM MELTING POINT OF 1000 DEGREE F.

CLEANOUTS :

A. CLEANOUT INSTALLED IN FLOORS AND WALKS SHALL HAVE ADJUSTABLE CAST IRON BODY WITH CAST BRASS PLUG, LEAD SEAL AND SQUARE NICKEL BRONZE TOP WITH WATERTIGHT CASKETED COVER. CLEANOUTS SHALL BE J.R. SMITH, JOSAM, ZURN OR ENGINEERING APPROVED EQUAL.

VALVES:

A. VALVES SHALL BE INSTALLED AS NOTED ON CONTRACT DOCUMENTS. EXISTING VALVES IN PLACE SHALL BE VERIFIED FOR SAFE OPERATIONS AND SHALL BE REPLACED WITH THAT OF NEW IF DETERMINED TO BE UN-USABLE.

B. DOMESTIC COLD AND HOT WATER SYSTEM VALVES 1 1/4" AND SMALLER SHALL BE CAST BRONZE BODY, FULL PORTED, SOLDERED END GATE VALVES RATED FOR CLASS 150, 200 WOG SERVICES. DOMESTIC COLD AND HOT WATER SYSTEMS VALVES 1 1/2" AND 2" SHALL BE CAST BRONZE, FULL PORTED, THREADED END GATE VALVES RATED FOR CLASS 150, 200 WOG SERVICES. VALVES SHALL BE PROVIDED WITH STEM EXTENSION FOR INSULATION THICKNESS SPECIFIED. VALVES SHALL BE NIBCO OR JENKINS. VALVE NOT LISTED SHALL REQUIRE ENGINEERING APPROVED EQUAL.

PIPE INSULATION:

A. ALL PLUMBING PIPE INSULATION SYSTEMS, INCLUDING JACKETING, COVERINGS, ADHESIVES WHEN USED, SHALL HAVE A FLAME SPREAD RATING NOT EXCEEDING TWENTY-FIVE (25) AND A SMOKE DEVELOPMENT RATING NOT EXCEEDING FIFTY (50) WHEN THE INSULATION ASSEMBLY IS TESTED AS COMPOSITE.

1. INSULATE ALL COLD AND HOT WATER PIPING IN ACCORDANCE WITH IECC 2015 ADDITION

2. COLD WATER PIPING: INSULATION SHALL BE ½" FOR PIPING BELOW 1 ½" DIAMETER AND 1½" FOR PIPING ABOVE 1 ½" DIAMETER

3. HOT WATER PIPING: INSULATION SHALL BE: 1" FOR PIPING BELOW 1 ½" DIAMETER, AND 1½" FOR PIPING ABOVE 1 ½" DIAMETER

4. ALL PIPE INSULATION FOR PIPE FITTINGS SHALL BE PRE-MOLDED TO FIT FITTINGS AND SHALL BE ENCLOSED UNDER PRE-MOLDED PVC FITTING JACKET.

HANGERS:

A. HANGERS FOR HORIZONTAL PIPING SHALL BE CLEVIS TYPE AND SHALL BE MANUFACTURED BY MODERN, ANVIL OR ENGINEERING APPROVED EQUAL.

B. HANGERS FOR INSULATED PIPING SHALL EXTEND AROUND INSULATION. PROVIDE 16 GAGE GALVANIZED STEEL INSULATION PROTECTION SADDLES 12" LONG AT EACH HANGER ON ALL INSULATED LINES .

C. A HANGER SHALL BE PROVIDED WITHIN ONE (1) FOOT OF EACH BEND IN HORIZONTAL PIPING. VERTICAL PIPING SHALL BE SUPPORTED AT EACH FLOOR OR AT INTERVALS NOT EXCEEDING TEN (10) FEET.

D. HANGERS SHALL BE FASTENED BY MEANS OF THREADED RODS TO STEEL BEAM CLAMPS, CENTER OF BAR JOIST, CENTER OF TRUSSES, ETC. ALL HANGERS SHALL PERMIT ADEQUATE ADJUSTMENT AFTER ERECTION WHILE STILL SUPPORTING THE LOAD.

PROTECTION OF WORK AND EQUIPMENT:

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WORK DAMAGED DURING CONSTRUCTION. ANY PLUMBING WORK DAMAGED BY ANY OTHER CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AND IN PERFECT WORKING CONDITION WITHOUT EXTRA COST TO THE OWNER. ALL FIXTURES AND FITTINGS SHALL BE ADEQUATELY PROTECTED BEFORE, DURING AND AFTER INSTALLATION.

B. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PLUMBING FIXTURES AT TIME OF FINAL INSPECTION. ANY BROKEN FIXTURES WILL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER REGARDLESS OF BY WHOM THE FIXTURE WAS BROKEN.

TESTING:

A. THE CONTRACTOR SHALL NOTIFY ENGINEER TWENTY FOUR (24) HOURS IN ADVANCE OF ALL TESTING. THE CONTRACTOR SHALL MAKE ALL NECESSARY PRELIMINARY TEST TO INSURE A TIGHT SYSTEM. ANY JOINTS FOUND TO LEAK UNDER PRESSURE SHALL BE CLEANED AND REMADE.

B. ALL SANITARY WASTE, AND VENT PIPING SHALL BE TESTED IN ACCORDANCE WITH INTERNATIONAL PLUMBING CODE (IPC) REQUIREMENTS.

C. ALL WATER PIPING HOT AND COLD SHALL BE TESTED IN ACCORDANCE WITH INTERNATIONAL PLUMBING CODE (IPC) REQUIREMENTS.

D. CONTRACTOR SHALL FURNISH ALL EQUIPMENT NECESSARY TO PERFORM TEST IN ACCORDANCE WITH CODE REQUIREMENTS.

STERILIZATION:

A. WATER PIPING SHALL BE CHARGED WITH A CHLORINE SOLUTION CONTAINING NOT LESS THEN 50-PPM AVAILABLE CHLORINE. THE SOLUTION SHALL REMAIN IN PIPING FOR A MINIMUM PERIOD OF 6 HOURS, DURING WHICH TIME VALVES SHALL BE OPENED AND CLOSED TO PERMIT A SMALL FLOW OF THE SOLUTION. AT END OF SIX (6) HOURS THE SOLUTION SHALL BE TESTED AND MUST CONTAIN A RESIDUAL OF AT LEAST 5 TO 10 PPM. THE SYSTEM SHALL THEN BE DRAINED AND FLUSHED TO PROVIDE SATISFACTORY POTABLE WATER BEFORE FINAL CONNECTION IS MADE TO THE EXISTING DISTRIBUTION SYSTEM.

B. THE CONTRACTOR SHALL CONTRACT WITH AN INDEPENDENT TESTING LABORATORY FOR A CERTIFICATION LETTER THAT THE SYSTEM STERILIZATION MEETS OR EXCEEDS STANDARDS FOR POTABLE WATER.

PLACING IN SERVICE:

A. UPON COMPLETION OF THE ENTIRE SYSTEM INSTALLATION, THE ENTIRE SYSTEM AND EQUIPMENT SHALL BE TESTED BY ACTUAL OPERATIONS TO PROVIDE THAT ALL FIXTURES OPERATE AS INTENDED.

B. THE CONTRACTOR SHALL FLUSH ALL WASTE PIPING PRIOR TO FINAL CONNECTION TO EXISTING SYSTEM , TO ENSURE THAT NO FOREIGN MATERIALS ARE IN THE LINES, AND CONTINUOUS FLOW OF WATER AND WASTE CAN BE AFFECTED.

C. THE CONTRACTOR SHALL FLUSH ALL WATER PIPING PRIOR TO THE CONNECTION OF FLUSH VALVE, AND FAUCET AERATORS TO PROVIDE A CLEAN AND OPERATIONAL WATER SYSTEM.

D. THE CONTRACTOR SHALL PLACE THE ENTIRE SYSTEM IN A SATISFACTORY OPERATING CONDITION AND SHALL FURNISH ALL ASSISTANCE AND INSTRUCTIONS REQUIRED.

E. IT IS THE CONTRACTORS RESPONSIBILITY TO INSURE ALL FLOOR DRAINS AND CLEANOUTS ARE IN A CLEAN CONDITION.

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GEORGIA REGISTERED NO. PE28655 PROFESSIONAL ENGINEER CAPRICE BAUMGRASS 12-4-24

BUILDING #2
COLDBROOK PLAZA
OLD RICHMOND ROAD

BID SET

PLUMBING SPECIFICATIONS

P4.0

2023-218

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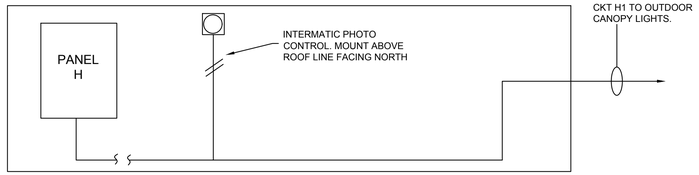
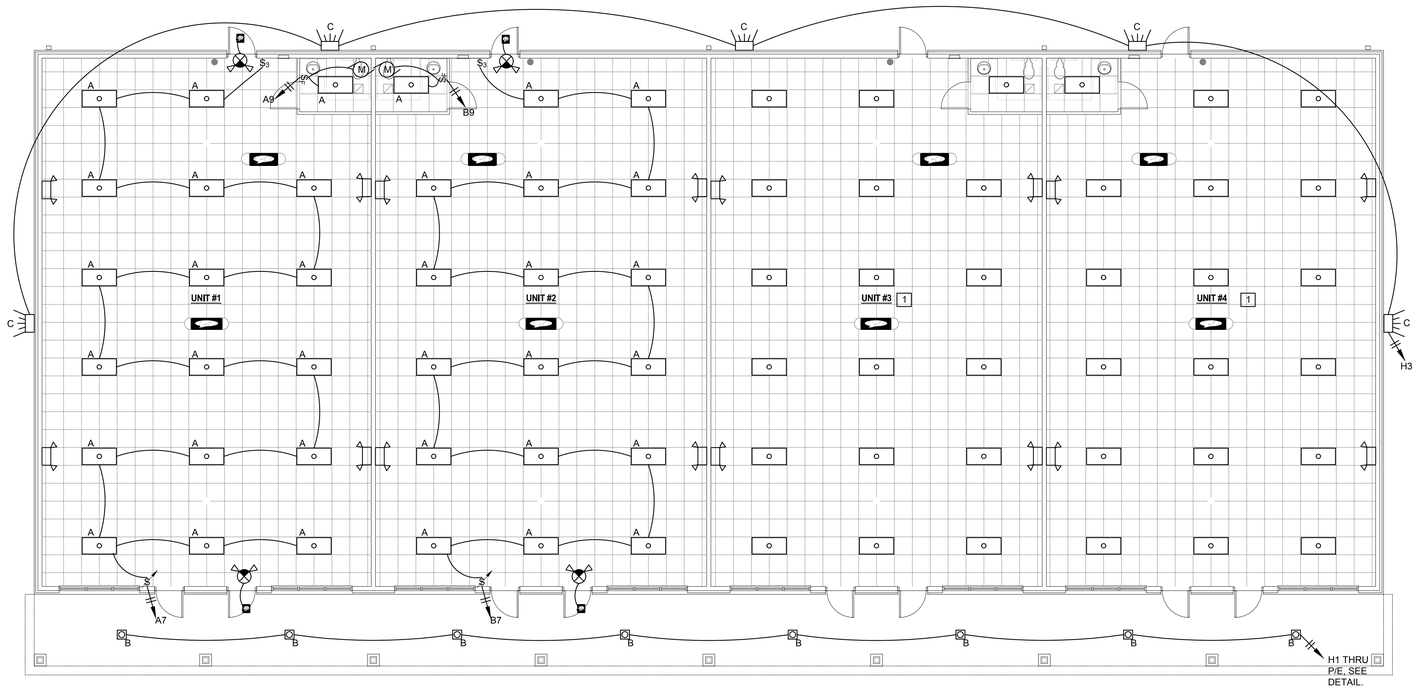


2 LIGHTING CONTROL DIAGRAM
E1.0 SCALE: NONE

LIGHTING SCHEDULE		
SYM	DESCRIPTION	MANUFACTURER
A	LED 2X4 FLAT PANEL. MVOLT, SWITCHABLE CCT, SWITCHABLE LUMEN OUTPUT, 0-10V DIMMING, 49 WATTS MAX.	LITHONIA CPX 2X4 ALO8 SWW7 OR EQUAL AS APPROVED
B	6" LED RECESSED DOWNLIGHT. MVOLT, SWITCHABLE CCT, SWITCHABLE LUMEN OUTPUT, 0-10V DIMMING, WIDE DISTRIBUTION, 13 WATTS MAX.	LITHONIA LBR6 ALO1 SWW1 AR LSS WD MVOLT UGZ OR EQUAL AS APPROVED
C	OUTDOOR LED WALL PACK. MVOLT, 4000K, SWITCHABLE LUMEN OUTPUT, INTEGRATED PHOTOCELL, MT HT. 12.5', FINISH TBD, 54 WATTS MAX.	LITHONIA TWX2 LED ALO 40K MVOLT PE OR EQUAL AS APPROVED
	EMERGENCY EXIT COMBO FIXTURE. 120/277V, TWO 1.5W LED LAMP HEADS, NI-CAD HIGH OUTPUT BATTERY. L - INDICATES REMOTE LAMP, ARROW INDICATES DIRECTIONAL.	LITHONIA LHQM LED HO OR EQUAL AS APPROVED
	EMERGENCY LIGHT FIXTURE. 120/277V, 2.4W ADJUSTABLE LED LAMPS, 220 LUMENS, NI-CAD BATTERY.	LITHONIA ELM2L OR EQUAL AS APPROVED

POWER PLAN NOTES

1 UNIT #3 & #4 TO BE MIRRORED LAYOUTS OF UNIT #1 & #2. SEE PLAN & RISER DIAGRAM (E3.0) FOR MORE DETAILS.



1 ELECTRICAL LIGHTING PLAN
E1.0 SCALE: 1/8" = 1' - 0"

8' 0' 8' 16' 24' 32'
GRAPHIC SCALE IN FEET

DPR ARCHITECTURE
D'ARCANGELO PALMER RULE
12A E. GRADY STREET
P.O. BOX 1382
912-764-6288
STATESBORO
GEORGIA 30458
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GEORGIA REGISTERED No. 25002 PROFESSIONAL ENGINEER DAVID G. LIBERATORE
12-4-24

BUILDING #2
COLDBROOK PLAZA
OLD RICHMOND ROAD

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ELECTRICAL LIGHTING PLAN

E1.0

2023-218

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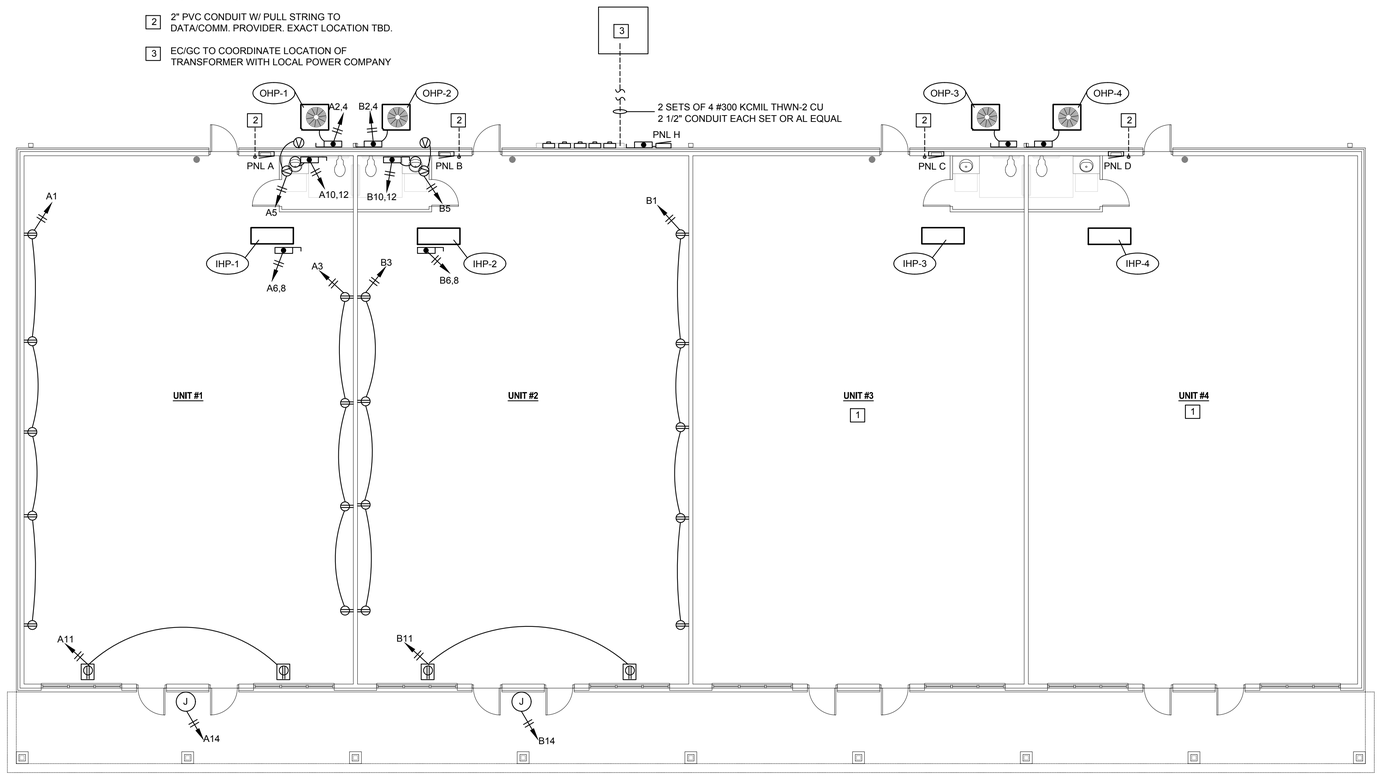
POWER PLAN NOTES

1. UNIT #3 & #4 TO BE MIRRORED LAYOUTS OF UNIT #1 & #2. SEE PLAN & RISER DIAGRAM (E3.0) FOR MORE DETAILS.
2. 2" PVC CONDUIT W/ PULL STRING TO DATA/COMM. PROVIDER. EXACT LOCATION TBD.
3. EC/GC TO COORDINATE LOCATION OF TRANSFORMER WITH LOCAL POWER COMPANY



1 / E2.0 ELECTRICAL POWER PLAN
SCALE: 1/8" = 1' - 0"

8' 0' 8' 16' 24' 32'
GRAPHIC SCALE IN FEET

DPR ARCHITECTURE
D'ARCANGELO PALMER RULE

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BUILDING #2
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ELECTRICAL POWER PLAN

E2.0

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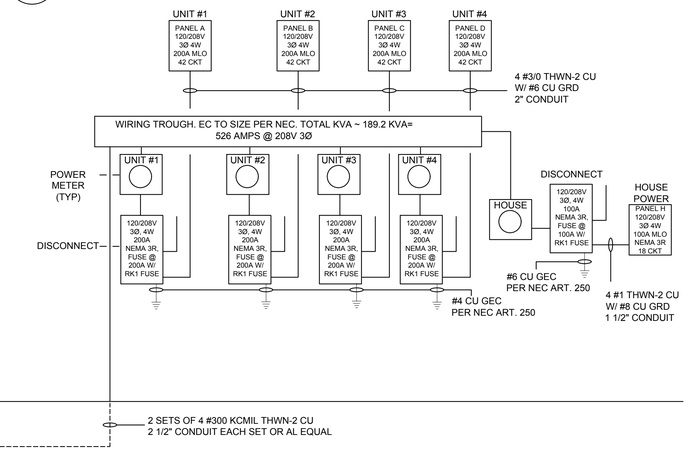

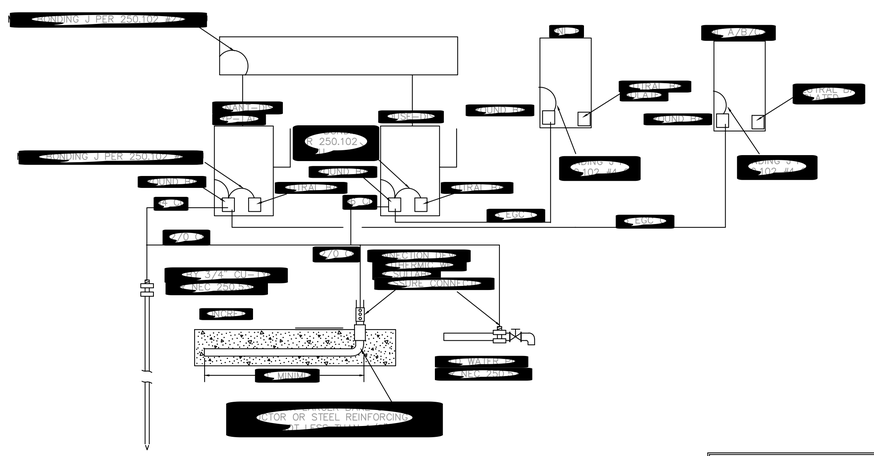

ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION
⫽↗	BRANCH CIRCUIT OR FEEDER CONDUIT CONCEALED IN WALLS OR ABOVE CEILING WITH GROUND. ARROW DENOTES HOME RUN TO PANEL. CROSS HATCHES DENOTE NUMBER OF CONDUCTORS IF OTHER THAN TWO, BUT DO NOT INCLUDE SWITCH LEGS OR THE EQUIPMENT GROUND WIRE. NUMBER 12 MINIMUM SIZE. SEE PANEL SCHEDULE FOR WIRE SIZE.
$ $3 $4 $F $P	120-277V/20A SINGLE POLE LIGHTING SWITCH, MOUNT AT 48" ABOVE FINISHED FLOOR. 3 - DESIGNATES 3-WAY CONNECTORS, 4 - DESIGNATES 4-WAY CONNECTORS, P - DESIGNATES INTEGRATED OCCUPANCY SENSOR. F - DESIGNATES WALL MOUNTED OCCUPANCY CONTROLLED DUAL LIGHT & EXHAUST FAN SWITCH (SENSOR SWITCH WSX 2P FAN OR EQUAL)
$↗ $P↗	120V, 0-10 VOLT DIMMER SWITCH, SLIDE CONTROL W/ ON-OFF FEATURE. MUST BE COMPATIBLE WITH LED FIXTURE CHOSEN. SEE LIGHTING SCHEDULE FOR DETAILS. P - DESIGNATES INTEGRATED OCCUPANCY SENSOR.
⩡	WALL MOUNTED LIGHT FOR OUTDOOR APPLICATION (TYP.)
○	LED RECESSED DOWNLIGHT FIXTURE, SEE LIGHTING SCHEDULE.
▭ A	LED LINEAR FIXTURE, FLAT PANEL, OR DROP IN TROFFER 120V (UNLESS NOTED OTHERWISE, SEE LIGHTING SCHEDULE) A = FIXTURE TYPE (SEE LIGHTING SCHEDULE)
⌖⊣	WALL MOUNTED LIGHT FIXTURE. SEE LIGHTING SCHEDULE.
⌖	CEILING MOUNTED LIGHT FIXTURE. SEE LIGHTING SCHEDULE.
Ⓜ	EXHAUST FAN, FURNISH, INSTALL, AND CONNECT ELECTRICALLY COMPLETE. SEE MECHANICAL DRAWINGS FOR MAKE AND MODEL.
⊗	EMERGENCY EXIT LIGHT WITH FACES AND ARROWS AS INDICATED. SHADED AREA DENOTES FACES. SEE LIGHT FIXTURE SCHEDULE. CONNECT TO CONTINUOUS (UNSWITCHED) POWER SUPPLY SERVING LIGHTING IN THE PARTICULAR SPACE. MOUNTED 9'-0" AFF.
◁▭▷	EMERGENCY LIGHTS - SURFACE MOUNTED LED EMERGENCY FIXTURE W/ BATTERY BACKUP. SEE LIGHT FIXTURE SCHEDULE. CONNECT TO CONTINUOUS (UNSWITCHED) POWER SERVING LIGHTING IN THE PARTICULAR SPACE. MOUNTED 8'-0" AFF.
TEL	TELEPHONE CABINET BACKBOARD SHALL BE 3/4" PLYWOOD
⊡	ENCLOSED DISCONNECT SWITCH, NEMA 3R FOR OUTDOOR, NEMA 1 FOR INDOOR, MOUNTED 30"AFF TO BUILDING, EXCEPT AS NOTED ON PRINTS. SIZE DISCONNECT AND FUSE TO MEET HVAC MFRS SPECIFICATIONS.
---------	UNDERGROUND OR UNDER STRUCTURE RIGID METAL CONDUIT. BURY AT A DEPTH OF 24" BELOW GRADE.
▭	ELECTRICAL PANELBOARD (RECESSED OR FLUSH MOUNTED). SEE RISER AND PANEL SCHEDULE FOR RATINGS.
OHP# IHP#	HEAT PUMP UNIT, # - INDICATES SPECIFIC UNIT, I - INDICATES INDOOR, O - INDICATES OUTDOOR. (SEE MECHANICAL SCHEDULE FOR CORRECT UNIT)
Ⓙ	WALL / CEILING MOUNTED JUNCTION BOX OR EQUIPMENT JUNCTION BOX WHEN FURNISHED WITH COVER. MINIMUM SIZE 4" x 4" x 1-1/2". SIZE PER NEC.
E	EQUIPMENT CONNECTION (EXACT LOCATION TO BE DETERMINED BY KITCHEN/ EQUIPMENT MANUFACTURER' S SPECIFICATIONS.)
⊖	20A,120VOLT DUPLEX CONVENIENCE OUTLET, CENTERED VERTICALLY 18" AFF UNLESS OTHERWISE NOTED.
⊘	20A,120VOLT GFI DUPLEX CONVENIENCE OUTLET, CENTERED VERTICALLY 18" AFF UNLESS OTHERWISE NOTED. IF LOCATED OUTSIDE, RECEPTACLE WILL HAVE INTEGRAL GROUND FAULT INTERRUPTER AND WEATHERPROOF COVER. "GFI" DENOTES INTEGRAL GROUND FAULT INTERRUPTER. MOUNT GFI'S IN BATHROOMS OR SINKS, 6" ABOVE COUNTER TOPS.
⊕	20A,120VOLT QUAD CONVENIENCE OUTLET, CENTERED VERTICALLY 18" AFF UNLESS OTHERWISE NOTED.
◀	WALL MOUNTED DATA/TELEPHONE JACK LOCATION. RUN 1" CONDUIT W/ PULL STRING TO ABOVE CEILING.

ELECTRICAL NOTES

1. OUTLET BOXES ON OPPOSITE SIDES OF FIRE RESISTANT WALL OR SHAFT ENCLOSURE SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 24" MINIMUM.
2. ALL CONVENIENCE OUTLETS INSTALLED TO SERVE A KITCHEN COUNT TOP SHALL BE GFI PROTECTED PER NEC.
3. INSTALL SMOKE DETECTORS PER NFPA 72 AND IBC. SEE ELECTRICAL SYMBOLS.
4. MAINTAIN CONTINUOUS GROUNDS ON ALL RECEPTACLES.
5. USE FIRE RATED MATERIALS IN RATED WALLS. FOR STOP PER NFPA.
6. CEILING PENETRATIONS SHALL MEET THE REQUIREMENT OF NEC AND IBC.
7. GROUND ELECTRICAL SERVICE PER NEC250-66 AND AS APPROVED BY LOCAL AHJ.
8. MAINTAIN 3 FT. MINIMUM CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT PER NEC 110.26 (A)
9. CONSULT LOCAL UTILITY AND BUILDING AUTHORITY FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION OF ELECTRICAL EQUIPMENT. VERIFY AVAILABLE FAULT CURRENT IS LESS THAN EQUIPMENT RATING SPECIFIED. ELECTRICAL CONTRACTOR MAY REDUCE INTERRUPTING RATING OF EQUIPMENT IF LOCAL UTILITY AVAILABLE FAULT CURRENT IS SUBSTANTIALLY LOWER THAN ANTICIPATED AND SHALL GAIN APPROVAL IN WRITING FROM ENGINEER PRIOR TO PURCHASE AND INSTALLATION. INSTALLATION SHALL MEET THE REQUIREMENTS OF NEC 110.9 AND 110.10.
10. FIRE ALARM (BY OTHERS, IF REQUIRED). GAIN APPROVAL FROM LOCAL FIRE MARSHALL ON FIRE PROTECTION EQUIPMENT LAYOUT PRIOR TO INSTALLATION AND APPROVAL. FIRE MARSHAL MAY REQUIRE ADDITIONAL EQUIPMENT (SMOKE DETECTORS, EXIT SIGNS, EGRESS LIGHTS, ETC) GREATER THAN THAT SHOWN. IF ADDITIONAL EQUIPMENT IS REQUESTED OTHER THAN THAT SHOWN, CONTRACTOR SHALL CONSULT ARCHITECT / ENGINEER PRIOR TO CONTINUING. CONTRACTOR SHALL BE RESPONSIBLE FOR FAILURE TO INFORM ENGINEER AND ARCHITECT AND SHALL INCUR ALL COST FOR ADDITIONAL CHANGES WITHOUT PRIOR APPROVAL. INSTALL FIRE ALARM EQUIPMENT PER NFPA 72.
11. HOME RUNS FOR ALL 20 AMP BRANCH CIRCUITS LONGER THAN 75 FEET SHALL BE AT LEAST 10 AWG.
12. ALL 10,000 AIC RATED BREAKERS SHALL BE SERIES RATED FOR 22,000 AIC W/ MAIN CB.

FAULT CURRENT CALCULATIONS
- UTILITY FAULT CURRENT @ 150 KVA TRANSFORMER SECONDARY = 26,025
- CALCULATED FAULT CURRENT w/ 20' OF 2 SETS OF 300 KCMIL CU @ TOP OF FUSE= 23,740
- ESTIMATED LET THRU RMS CURRENT BASED ON BUSSMANN RK1 200 FUSE = 5000
- CALCULATION PERFORMED 10-11-24
- INSTALL LABELING ON SERVICE EQUIPMENT PER NEC 110.16 AND 24

ELECTRICAL MATERIALS

1. FURNISH ALL NECESSARY MATERIALS, TOOLS AND LABOR, AND INSTALL A COMPLETE AND FULLY OPERABLE SYSTEM AS SHOWN OR REASONABLY IMPLIED. ALL OUTLETS SHALL BE LEFT READY FOR USE. ALL MATERIALS SHALL BE NEW FREE OF DEFECTS AND BE UL LISTED.
2. ALL WORK SHALL BE IN ACCORDANCE WITH NEC 2020, LOCAL CODES AND ORDINANCES AND THE REQUIREMENTS OF THE UTILITY COMPANY. LOCAL CODES SHALL GOVERN IN THE EVENT OF A CONFLICT.
3. APPLY AND PAY FOR ALL REQUIRED PERMITS, INSPECTIONS, ETC.
4. UNLESS OTHERWISE NOTED, ALL WIRING SHALL BE RUN CONCEALED AND OUTLETS SHALL BE FLUSH MOUNTED IN WALLS, CEILINGS OR FLOORS.
5. OUTLET BOXES SHALL BE SIZED AND INSTALLED PER NEC AND MEET ALL LOCAL CODES.
6. PANELS SHALL HAVE INSULATED NEUTRAL BUSSES AND SEPARATE EQUIPMENT GROUNDING BUSSES. PROVIDE CIRCUIT INDEX CARDS.
7. LIGHTING FIXTURES SHALL BE COMPLETE WITH LAMPS, BALLASTS (IF APPLICABLE) AND MOUNTING ACCESSORIES AS REQUIRED. GROUND FIXTURES PER NEC ARTICLE 410-20.
8. ALL POWER WIRING AND CONNECTIONS TO MECHANICAL EQUIPMENT SHALL BE PROVIDED BY THIS CONTRACTOR.
9. SEAL ALL PENETRATIONS IN FIRE RATED ASSEMBLIES WITH 3-M, OR EQUAL FIRE STOP MATERIAL. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
10. AT THE COMPLETION OF THIS WORK, THIS CONTRACTOR SHALL REMOVE ALL RUBBISH CAUSED BY HIS WORK AND SHALL THOROUGHLY CLEAN ALL ELECTRICAL EQUIPMENT.
11. GROUND SYSTEMS PER NEC ARTICLE 250 AND LOCAL CODES.
12. THE ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT AND LABOR FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OR FIRS BENEFICIAL USE BY THE OWNER, WHICHEVER COMES FIRST. THE ENTIRE SYSTEM SHALL BE FREE OF SHORTS AND GROUNDS. CORRECTIONS TO THE WIRING SYSTEM, DUE TO DEFECTIVE MATERIALS AND WORKMANSHIP, WITHIN THE GUARANTEE PERIOD, SHALL BE MADE BY THE CONTRACTOR AT NO COST TO THE OWNER.
13. ALL HEATING, VENTILATION , AND AC BREAKERS SHALL BE HACR TYPE PER MANUFACTURER'S SPECIFICATIONS.
14. CONDUCTORS SHALL BE THHN/ THWN-2 COPPER, 10WG & SMALLER SHALL BE SOLID, 8 AWG AND LARGER SHALL BE STRANDED. COLOR CODE SHALL BE AS FOLLOWS: 120/208 3Ø,4W: ØA - BLACK, ØB - RED, ØC -BLUE, NEUTRAL - WHITE, EQUIPMENT GROUND - GREEN. 277/480 3Ø,4W: ØA - BROWN, ØB - ORANGE, ØC -YELLOW, NEUTRAL - GRAY, EQUIPMENT GROUND-GREEN.
15. USE OF NM, NMC AND NMS CABLE IN LIEU OF CONDUIT AND STRANDED THHN, THWN WIRE FOR BRANCH CIRCUITS PER CURRENT NEC IS ALLOWED PROVIDED LOCAL AHJ APPROVES OF ITS USE. RESIDENTIAL CLASSIFICATIONS ONLY.
16. CONDUITS CONCEALED IN WALLS AND ABOVE CEILING SHALL BE EMT. UNDERGROUND CONDUITS SHALL BE PVC SCHEDULE 40, EXPOSED CONDUITS SHALL BE RIGID STEEL. CONDUITS SHALL BE RUN AT RIGHT ANGLES TO BUILDING WALLS. USE OF MC CABLE ALLOWED PER NEC APPROVED LOCATIONS & AHJ.
17. DEVICES AND DEVICE BOXES SHALL BE INSTALLED LEVEL AND PLUMB. DUPLEX RECEPTACLES SHALL BE INSTALLED SO THAT GROUNDS ARE AT BOTTOM. SINGLE POLE TOGGLE SWITCHES SHALL BE INSTALLED SO THAT OFF POSITION IS DOWN.
18. DEVICE AND DEVICE PLATE MATERIALS AND COLORS SHALL BE AS SPECIFIED BY OWNER / ARCHITECT.
19. ALL FUSES SHALL BE CLASS RK1 OR RK5 FUSES OR EQUAL WITH CURRENT LIMITING CHARACTERISTICS.
20. VERIFY WITH LOCAL UTILITY THE SHORT CIRCUIT KIA RATING AT SERVICE ENTRANCE IS LESS THAN 30 KIA.
21. LABEL ALL PANELS AND DISCONNECTS PER NEC ARC FLASH PROTECTION REQUIREMENTS.
22. AFFIX MAXIMUM FAULT CURRENT TO MAIN CIRCUIT PANEL OR DISCONNECT AT FACILITY PER NEC 110.16 AND 24.

POWER/LIGHTING PANEL: A/B/C/D

120/208V 3ϕ MLO 200 MINIMUM AIC EACH BREAKER 22,000 SQ D PANEL (OR EQUAL) FLUSH MOUNTED

LOAD A	LOAD B	LOAD C	LOAD SERVED	WIRE/CONDUIT SIZE	SIZE/POLE	CKT NO.	BUSS			CKT NO.	SIZE/POLE	WIRE/CONDUIT SIZE	LOAD SERVED	LOAD A	LOAD B	LOAD C
1000			RECEPTACLES	#12 - 1/2"	20/1	1	■			2	50/2	#8 - 3/4"	OHP - 1/2/3/4	2790		
	800		RECEPTACLES			3		■		4					2790	
		400	GFCI RECEPTACLES			5			■	6	50/2	#6 - 3/4"	IHP - 1/2/3/4			3945
850			LIGHTING			7	■			8				3945		
	100		LIGHTING - RESTROOM			9		■		10	20/2	#12 - 1/2"	WATER HEATER		1500	
		1200	SHOW WINDOW			11			■	12						1500
1500			BATHROOM GFI			13	■			14	20/1	#12 - 1/2"	SIGN CIRCUIT	1200		
	1500		COFFEE POT			15		■		16			FUTURE FIT OUT POWER		2000	
		1500	MICROWAVE			17			■	18			FUTURE FIT OUT POWER			2000
400			TELE BACKBOARD			19	■			20			FUTURE FIT OUT POWER	2000		
			SPARE			21		■		22			FUTURE FIT OUT POWER		2000	
						23			■	24			FUTURE FIT OUT POWER			2000
						25	■			26			SPARE			
						27		■		28						
						29			■	30						
						31	■			32						
						33		■		34						
						35			■	36						
						37	■			38						
						39		■		40						
						41			■	42						
TOTAL LOAD	TOTAL LOAD	TOTAL LOAD	TOTAL PANEL VA:	41055										TOTAL LOAD	TOTAL LOAD	TOTAL LOAD
3750	2400	3100												9935	8290	9445
			TOTAL LOAD CURRENT:	114												

POWER/LIGHTING PANEL: H

120/208V 3ϕ MCB 225 MINIMUM AIC EACH BREAKER 22,000 SQ D PANEL (OR EQUAL) SURFACE MOUNTED NEMA 3R RATED

LOAD A	LOAD B	LOAD C	LOAD SERVED	WIRE/CONDUIT SIZE	SIZE/POLE	CKT NO.	BUSS			CKT NO.	SIZE/POLE	WIRE/CONDUIT SIZE	LOAD SERVED	LOAD A	LOAD B	LOAD C
100			LIGHTING - CANOPY	#12 - 1/2"	20/1	1	■			2	20/1	#12 - 1/2"	FUTURE PYLON SIGN	1000		
	270		LIGHTING - WALL PACKS	#12 - 1/2"		3		■		4			FUTURE PYLON SIGN		1000	
			SPARE			5			■	6			SPARE			
						7	■			8						
						9		■		10						
						11			■	12						
						13	■			14						
						15		■		16						
						17			■	18						
TOTAL LOAD	TOTAL LOAD	TOTAL LOAD	TOTAL PANEL VA:	3810										TOTAL LOAD	TOTAL LOAD	TOTAL LOAD
100	270	0												1000	1000	0
			TOTAL LOAD CURRENT:	11												

* ELECTRICAL CONTRACTOR TO VERIFY ALL HVAC ELECTRICAL EQUIPMENT SPECS PRIOR TO PURCHASE AND INSTALLATION. CONTACT ENGINEER IF ELECTRICAL LOADS DIFFERENT THAN SHOWN. ELECTRICAL CONTRACTOR SHALL VERIFY ALL HACR BREAKER SIZES AND ASSOCIATED WIRE SIZE WITH HVAC EQUIPMENT PRIOR TO PURCHASE AND INSTALLATION. FAILURE TO DO SO WILL NOT RESULT IN ANY ADDITIONAL COST TO THE OWNER, ARCH, OR ENGINEER.

** INSTALL EQUIPMENT GROUND WIRE PER NEC ART. 250 TABLE 122.

1 ELECTRICAL NOTES & SCHEDULES
E-3 SCALE: NONE

2 POWER RISER DIAGRAM
E3.0 SCALE: NONE

3 GROUNDING DIAGRAM
E3.0 SCALE: NONE

DPR ARCHITECTURE
D'ARCANGELO PALMER RULE

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[redacted]

GEORGIA REGISTERED No. 25002 PROFESSIONAL ENGINEER KENT D. GILBREATH
Kent Gilbreath
12-4-24

BUILDING #2
COLDBROOK PLAZA
OLD RICHMOND ROAD

BID SET

[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

[redacted]

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ELECTRICAL NOTES, LEGEND, & SCHEDULES

E3.0