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April 5, 2021

Via Electronic Mail Only

cstoner@hpellow.com

Cory Stoner, P.E.

Harold E. Pellow & Associates, Inc.

17 Plains Road

Augusta, NJ 07822

RE: BHT Properties
Andover Township Land Use Board
248 Stickles Pond Road
Block 151, Lot 21

Dear Mr. Stoner:

I received your report dated March 31, 2021. Attached hereto please find the following:

1. Traffic Impact Study for Proposed Construction Equipment & Material Storage Facility prepared by Dynamic Traffic, revised February 4, 2021.
2. Document entitled “Construction Business Office and Construction Equipment and Material Storage” providing property information. Description of construction materials/equipment and site operations.
3. Building Floorplan prepared by The Hill Architect Firm, revised February 5, 2021.
4. Updated Environmental Impact Study bearing most recent revision date January 26, 2021.

A description of the nature of the proposed use is set forth therein as follows:

The proposed project consists of the construction of a construction office with construction equipment and material storage areas on the property located on 248 Stickles Pond Road, on Lot 151, Block 21 in Andover Township, Sussex County, New Jersey. The 100-acre subject property currently consists of a former airport. The proposed project consists of the demolition of hangars, paved drives, concrete pads, three dwellings, two garages, and three sheds. The existing 112,050 square foot asphalt runway is to remain. The proposed construction consists of a 12,860 square foot building, 2,883 square feet of concrete sidewalk and curbing, lighting and landscape improvements, 35,235 square feet to be paved with asphalt for parking and circulation and 1,822,812 square feet to be paved with asphalt millings and used as construction equipment and material storage area. The materials to be stored in site are stone, aggregate, precast concrete structures and other typical natural construction materials.

I am responding to certain paragraphs of your report as indicated.

3. **Completeness Comments**

- a. Updated Environmental Impact Statement. Enclosed herewith.
- b. Updated Traffic Impact Study. Enclosed herewith.
- c. Project Narrative. See above.
- d. Updated Architectural Drawings. Floor Plans/Construction Document attached.

4. **Zoning Comments**

- b. The existing home on the site will be removed.

5. **Site Plan Layout & Parking**

- b. The proposed building is the same building as submitted for the prior proposed use.
- c. A waiver is requested for parking lot spaces to permit 9 x 18 ft. spaces.
- d. A design waiver is requested for the absence of a loading space.
- e. A design waiver is requested for the fence height. The extra fence height is to provide additional visual screening. The fence type as previously proposed is now proposed.
- f. A waiver is requested for not paving all parking areas.
- g. A waiver request is made for absence of curbing for proposed parking areas.

6. **Stormwater Management**. The Applicant's Engineer will address the concerns as set forth.

7. **Architectural Plans**. See attached Floor Plans/Construction Document.

9. **Signage.**

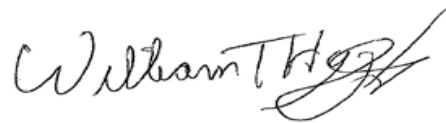
- a. The proposed signage will be redesigned to comply with the ordinance requirements.

10. **Environmental Comments & Permits.**

- a. Environmental Impact Statement. Enclosed herewith.
- b. Freshwater Wetlands.

Very truly yours,

DOLAN & DOLAN, PA



William T. Haggerty

WTH:jm

Enclosures

cc: Ram Adar (via email: ram@bhtpropertiesgroup.com)
Lula Elharar (via email: PM18@bhtpropertiesgroup.com)
Alex Tukh (via email: alex@bhtpropertiesgroup.com)
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Liz Durkin, Esq. (via email: ldurkin@durkinfirm.com)

TRAFFIC IMPACT STUDY

For

**BHT Properties Group, LLC
Proposed Construction Equipment
& Materials Storage Facility**

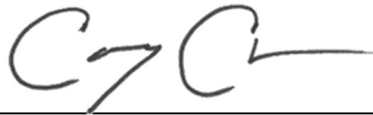
Property Located at:

**248 Stuckles Pond Road
Block 151 – Lot 21
Township of Andover, Sussex County, NJ**

Prepared by:



1904 Main Street | 245 Main Street, Suite #110
Lake Como, NJ 07719 | Chester, NJ 07930
(732) 681-0760



Corey Chase, PE
NJ PE License #47470



Craig Peregoy, PE
NJ PE License #45880

August 6, 2020
Revised: February 4, 2021

3527-99-001TE

INTRODUCTION

It is proposed to construct a construction equipment and materials storage facility on a parcel of land currently occupied by a former airport runway, located along the westbound side of Stickles Pond Road east of US Route 206 in Andover Township, Sussex County, New Jersey, see Figure 1 in Appendix A. The site is designated as Block 151 – Lot 21 on the Township of Andover Tax Maps. It is proposed to develop the site with a construction materials and equipment storage facility, including the construction of a 12,860 SF office (The Project). The site will serve as an outdoor storage facility for special order construction materials and equipment with a construction business office and receiving area. The site is located within the C/I – Commercial Industrial District. Access to the site is proposed to be provided via a left/right turn in/right turn out driveway along Stickles Pond Road.

Dynamic Traffic LLC has been retained to prepare this study to assess the traffic impact associated with the construction of The Project on the adjacent roadway network. This study documents the methodology, analyses, findings and conclusions of our study and includes:

- A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, traffic control, and location and geometry of existing driveways and intersections.
- Existing traffic data was collected via manual turning movement (MTM) counts during the weekday AM and weekday PM peak periods at the intersection of:
 - US Route 206 and Greendale Road (CR 611)/Stickles Pond Road
- Existing traffic volumes were normalized based on historical data to account for impacts caused by COVID-19.
- Projections of traffic to be generated by the proposed development were prepared based upon the operational characteristics of the facility as provided by the client. Site traffic was then assigned to the adjacent street system based upon the anticipated directional distribution.
- Capacity analyses were conducted for the Existing, No Build, and Build conditions for the study intersections.
- The proposed point of ingress and egress was inspected for adequacy of geometric design, spacing and/or alignment to streets and driveways on the opposite side of the street, relationship to other driveways adjacent to the development, and conformance with accepted design standards.
- The site plan as designed was reviewed for sufficiency in accommodating large wheel base vehicles such as delivery trucks, refuse trucks, and emergency vehicles.
- The parking layout and supply was assessed based on accepted design standards, local requirements, and operational characteristics.

EXISTING CONDITIONS

A review of the existing roadway conditions near the proposed site was conducted to provide the basis for assessing the traffic impact of the development. This included field investigations of the surrounding roadways and intersections, collection of traffic volume data, and extensive analyses.

Existing Roadway Conditions

The following are descriptions of the roadways in the study area:

US Route 206 is a Rural Principal Arterial roadway under New Jersey Department of Transportation (NJDOT) jurisdiction with a general north/south orientation. In the vicinity of the site the posted speed limit is 50 MPH and the roadway provides one travel lane in each direction. On-street parking is not permitted. Curbing is provided along the frontage of certain developments, while sidewalk is not provided along either side of the roadway. US Route 206 provides a slightly curved horizontal alignment and a rolling vertical alignment. The land uses along US Route 206 in the vicinity of The Project are primarily commercial.

Greendale Road (CR 611) is a Rural Minor Collector under Sussex County jurisdiction with a general east/west orientation. In the vicinity of the site the posted speed limit is 40 MPH and the roadway provides one travel lane in each direction. On-street parking is not permitted, and curb and sidewalk are not provided along either side of the roadway. Greendale Road provides a curved horizontal alignment and a downgrade from east to west. The land uses along Greendale Road in the vicinity of The Project are primarily residential.

Stickles Pond Road is an Urban Local roadway under Andover Township jurisdiction with a general east/west orientation. In the vicinity of the site the posted speed limit is 35 MPH and the roadway provides on travel lane in each direction. On-street parking is not permitted, and curb and sidewalk are not provided along either side of the roadway. Stickles Pond Road provides a curved horizontal and a downgrade from east to west. The land uses along Stickles Pond Road in the vicinity of The Project are a mixture of industrial and residential.

Existing Traffic Volumes

Manual turning movement (MTM) counts were conducted on Thursday, July 30, 2020 from 7:00 to 9:00 AM and from 4:30 to 6:30 PM at the intersection of US Route 206 and Greendale Road (CR 611)/Stickles Pond Road. Review of the collected traffic data reveals that the weekday morning peak street hour (PSH) occurs between 7:30 - 8:30 AM and the weekday evening PSH occurs between 4:30 - 5:30 PM. Note that the 2020 counts were increased to better represent existing 2021 traffic volumes by applying a growth rate of 1.75% per year obtained from the NJDOT Annual Background Growth Rate Table for a period of one year. Figure 2, located in the Appendix, shows the existing peak hour traffic volumes at the study intersections. All traffic counts are contained in Appendix B.

It should be noted that various protocols associated with the COVID-19 pandemic were in effect as of the time of the traffic counts. As a result, current traffic volumes on the surrounding roadways are atypically low at this time and would not be representative of “existing” traffic conditions. Therefore, historical traffic volume data has been reviewed and compared with current traffic conditions. The following Automatic Traffic Recorder (ATR) counts have been obtained from the NJDOT count database:

- US Route 206 north of Stickles Pond Road – Tuesday, April 18, 2017
- Stickles Pond Road east of US Route 206 – Wednesday, August 15, 2018
- Greendale Road west of US Route 206 – Wednesday, August 15, 2018

In order to better represent 2021 traffic volumes, each NJDOT ATR count was grown utilizing its respective annual growth rate contained within the NJDOT Annual Background Growth Rate Table for the appropriate number of years. The historical traffic volumes representative of “existing” conditions were then compared to the MTM counts. The volumes along Route 206 were found to be higher than or representative of typical existing conditions, while the volumes along both Stickles Pond Road and Greendale Road were both found to be lower than the historical volumes representative of “existing” conditions. Adjustment factors of 1.51 and 1.17 were then applied to the eastbound approach weekday morning and weekday evening peak hour volumes, respectively, and adjustment factors of 2.07 and 1.34 were then applied to the westbound approach weekday morning and weekday evening peak hour volumes, respectively. Additionally, the movements that were still less than the highest peak hour volumes of the historical volumes representative of “existing” conditions were also factored to develop traffic volumes that best represent typical “existing” conditions. Located in Appendix A, Figure 3 shows the adjusted existing peak hour traffic volumes at the study intersections.

Existing Capacity Analysis

The methodology utilized in the capacity analyses is described in the *Highway Capacity Manual*, published by the Transportation Research Board. In general, the term Level of Service (LOS) is used to provide a “qualitative” evaluation of capacity based upon certain “quantitative” calculations related to empirical values, such as traffic volume and intersection control.

At signalized intersections, factors that affect the various approach capacities include width of approach, number of lanes, signal “green time”, turning percentages, truck volumes, etc. However, delays cannot be related to capacity in a simple one-to-one fashion. For example, it is possible to have delays in the Level of Service “F” range without exceeding roadway capacity. Substantial delays can exist without exceeding capacity if one or more of the following conditions exist: long signal cycle lengths; a particular traffic movement experiences a long red time; or progressive movement for a particular lane group is poor. Table I describes the level of service ranges for signalized intersections.

An unsignalized (STOP sign controlled) driveway or side street along a through route is seldom critical from an overall capacity standpoint, however, it may be of great significance to the capacity of the minor cross-route, and it may influence the quality of traffic flow on both. When analyzing an unsignalized intersection, it is assumed that both the major street through and right turn movements are unimpeded and have the right-of-way over all side street traffic and left turns from the major street. All other turning movements in the intersection cross, merge with, or are otherwise impeded by major street movements. Traffic delays at unsignalized intersections are determined by sequentially processing these impeded movements. Table II describes the level of service ranges for unsignalized (stop controlled) intersections.

Table I
Level of Service Criteria
for Signalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
A	0.0 to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	greater than 80.0

Table II
Level of Service Criteria
for Unsignalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
a	0.0 to 10.0
b	10.1 to 15.0
c	15.1 to 25.0
d	25.1 to 35.0
e	35.1 to 50.0
f	greater than 50.0

It should be noted that the analyses within the *Highway Capacity Manual* assume a random arrival for all the movements, which may not be the case if an adjacent traffic signal is present that platoons vehicles, such as the signalized intersection of Route 206 and Greendale Road (CR 611)/Stickles Pond Road.

All capacity analyses were performed utilizing Synchro 11 software. Table III summarizes the existing levels of service (LOS) and delays. All capacity analysis calculation worksheets are contained in Appendix C.

Table III
Existing Levels of Service

Intersection	Direction/ Movement	AM PSH	PM PSH	
Route 206 & Greendale Road/ Stickles Pond Road	EB	LT	D (47)	D (47)
		R	A (0)	A (2)
	WB	LTR	C (30)	C (32)
	NB	LTR	A (9)	B (13)
	SB	LTR	B (13)	B (12)
	Overall		B (17)	B (18)

A (#) - Signalized Intersection Level of Service (seconds of delay per vehicle)

The following are discussions pertaining to each of the existing intersections analyzed. It should be noted that the existing percentage of trucks and peak hour factors were used in the existing analysis.

Route 206 and Greendale Road/Stickles Pond Road

Greendale Road and Stickles Pond Road both intersect Route 206 to form a four-leg intersection controlled by a traffic signal. The signal timing directive was obtained from the New Jersey Department of Transportation which indicates that a two-phase variable background cycle is utilized (the traffic signal timing directive is included in Appendix B).

The eastbound approach of Greendale Road provides a shared left turn/through lane and a dedicated right turn lane, while the westbound approach of Stickles Pond Road provides a shared left turn/through/right turn lane. The northbound and southbound approaches of Route 206 both provide a shared left turn/through/right turn lane.

A review of the existing analysis reveals that the intersection operates at overall levels of service “B” and all movements operate at levels of service “D” or better during the analyzed peak periods. See Table III for the individual movement levels of service and delays.

FUTURE CONDITIONS

Traffic volumes and operational analyses were developed for both the 2023 No Build and Build conditions. The No Build conditions provide a baseline for assessing the impact of the site development traffic on the roadway system. The process of developing the No Build and Build traffic volumes and the subsequent analyses is outlined below.

Regardless of whether the subject site is developed or not, traffic volumes on the surrounding roadways are expected to increase as a result of developments throughout the region. A growth rate for roadways within the study area was obtained from the NJDOT Annual Background Growth Rate Table, which indicates a growth rate of 1.75% per year.

Through consultation with the Andover Township Planning Board staff, there are no other developments in the vicinity of the site that have been approved but not yet constructed that are identified as significant traffic generators. It was assumed that the background growth rate was adequate to account for the traffic associated with all developments not listed.

Future 2023 No Build traffic volumes were developed by applying the background growth rate of 1.75% for two (2) years to the study area roadways existing traffic volumes. Figure 4, in Appendix A, shows the 2023 No Build traffic volumes.

Traffic Generation

There is presently no data published for construction equipment and material storage facilities or uses of similar operation within the Institute of Transportation Engineers’ (ITE) publication, *Trip Generation, 10th Edition*. Therefore, in order to provide the most accurate estimates for the use, trip generation for The Project was based upon operational characteristics as provided by the client. It is our understanding that the proposed facility will operate with a maximum of 20 full time employees and there will be approximately 150 trips per day associated with the pick-up and delivery of the equipment and materials. Conservatively, it was assumed that all employees enter and exit the site during the same peak hour. It should be noted that the hours of operation will be from 8:00 AM – 5:00 PM, which was considered when calculating the number of peak hour deliveries. The following table details the proposed trip generation for The Project.

**Table IV
Trip Generation**

Trip Type		Daily			AM PSH			PM PSH		
		In	Out	Total	In	Out	Total	In	Out	Total
Construction Equipment & Materials Storage Facility	Cars (Employees)	20	20	40	20	0	20	0	20	20
	Trucks (Deliveries)	75	75	150	9	8	17	8	9	17
	Total	95	95	190	29	8	37	8	29	37

As seen above, The Project is anticipated to generate a maximum of 37 new peak hour trips, which is below the industry accepted standard of a significant increase in traffic of 100 trips. Based on *Transportation Impact Analysis for Site Development*, published by the ITE “it is suggested that a transportation impact study be conducted whenever a proposed development will generate 100 or more added (new) trips during the adjacent roadways’ peak hour or the development’s peak hour.” Additionally, NJDOT has determined that the same 100 vehicle threshold is considered a “significant increase in traffic,” hence, it is not anticipated that The Project will have any perceptible impact on the traffic operation of the adjacent roadway network.

Once the magnitude of traffic to be generated by the site is known, it is necessary to assign that traffic to the adjacent street system. The distribution of new traffic to the surrounding roadways is based on the location of primary arterial roadways, major signalized intersections and existing traffic patterns. Table V below summarizes the anticipated trip distribution for The Project.

**Table V
Trip Distribution**

To/From	Percentage	
	In	Out
Greendale Road – East	10%	-
Greendale Road – West	10%	10%
Route 206 – North	40%	50%
Route 206 – South	40%	40%
Total	100%	100%

Located in Appendix A, Figure 5 illustrates the total site generated volumes assigned to the study area network. The site generated volumes were added to the No Build traffic volumes to generate the Build traffic volumes, which are shown in Figure 6.

Future Capacity Analysis

Operational conditions at the study intersections were analyzed under the No Build and Build conditions and are summarized in Table VI below.

**Table VI
Future Levels of Service**

Intersection	Direction/ Movement		AM PSH		PM PSH		
			No Build	Build	No Build	Build	Build w/ Mit.
Route 206 & Greendale Road/Stickles Pond Road	EB	LT	D (49)	D (49)	D (48)	D (51)	D (43)
		R	A (0)	A (0)	A (2)	A (2)	A (2)
	WB	LTR	C (31)	C (34)	C (32)	D (40)	C (35)
	NB	LTR	A (9)	A (10)	B (14)	B (14)	B (16)
	SB	LTR	B (14)	B (15)	B (14)	B (15)	B (16)
	Overall		B (18)	B (19)	B (19)	C (21)	C (21)
Stickles Pond Road & Site Driveway	EB	L	-	a (8)	-	a (9)	-
	SB	R	-	b (11)	-	b (10)	-

a (#) - Unsignalized Intersection Level of Service (seconds of delay per vehicle)

A (#) - Signalized Intersection Level of Service (seconds of delay per vehicle)

Route 206 and Greendale Road/Stickles Pond Road

With the addition of site generated traffic, the intersection is anticipated to operate at overall intersection levels of service “C” or better during the analyzed peak hours. It should be noted that the westbound left turn/through/right turn movement is anticipated to degrade from No Build level of service “C” to Build level of service “D” during the weekday evening peak hour. However, with the reallocation of 3 seconds of green time from the Route 206 phase to the Greendale Road/Stickles Pond Road phase during the weekday evening peak hour, the No Build level of service can be maintained. See Table VI for the individual movement levels of service and delays.

Stickles Pond Road and Site Driveway

The site driveway is proposed to intersect Stickles Pond Road to form an unsignalized T-intersection with the southbound approach of the site driveway operating under stop control. The eastbound approach of Stickles Pond Road is proposed to provide a shared left turn/through lane, while the westbound approach is proposed to provide a shared through/right turn lane. The southbound approach of the site driveway is proposed to provide a right turn lane.

As designed, the driveway is anticipated to operate at levels of service “B” or better during the studied peak hours. See Table VI for the individual movement levels of service and delays.

SITE PLAN

Site Access and Circulation

The site plan was reviewed with respect to the site access and on-site circulation design. As noted previously, access to The Project will be provided via a left/right turn in/right turn out driveway along Stuckles Pond Road.

The parking lot will be serviced by parking aisles with widths of 24', which does not meet the Ordinance's minimum requirement of 25'. These aisles will safely and efficiently allow for two-way circulation and 90 degree parking and are consistent with accepted engineering design standards. Review of the site plan design indicates that the site can sufficiently accommodate, within paved areas, a large wheel base vehicle, such as a single unit truck (SU), or a tractor with a 53' trailer, along with the automobile traffic anticipated.

Parking

The site as proposed provides 62 parking spaces. As previously mentioned, the site will operate with a maximum of 20 employees, and all other trip generation will consist of deliveries and pick-ups. Therefore, the 62 parking spaces will be more than sufficient to support the demand of The Project. Additionally, ITE sets forth a peak parking demand of 2.51 parking spaces per 1,000 SF for general office buildings. This equates to a parking demand of 33 parking spaces for the 12,860 SF construction office, which is met as designed.

It is proposed to provide parking stalls with dimensions of 9'x18'. It should be noted that industry standards recommend stall widths of 9' and a length of 18' for low to moderate turnover parking stalls, which is met as designed.

FINDINGS & CONCLUSIONS

Findings

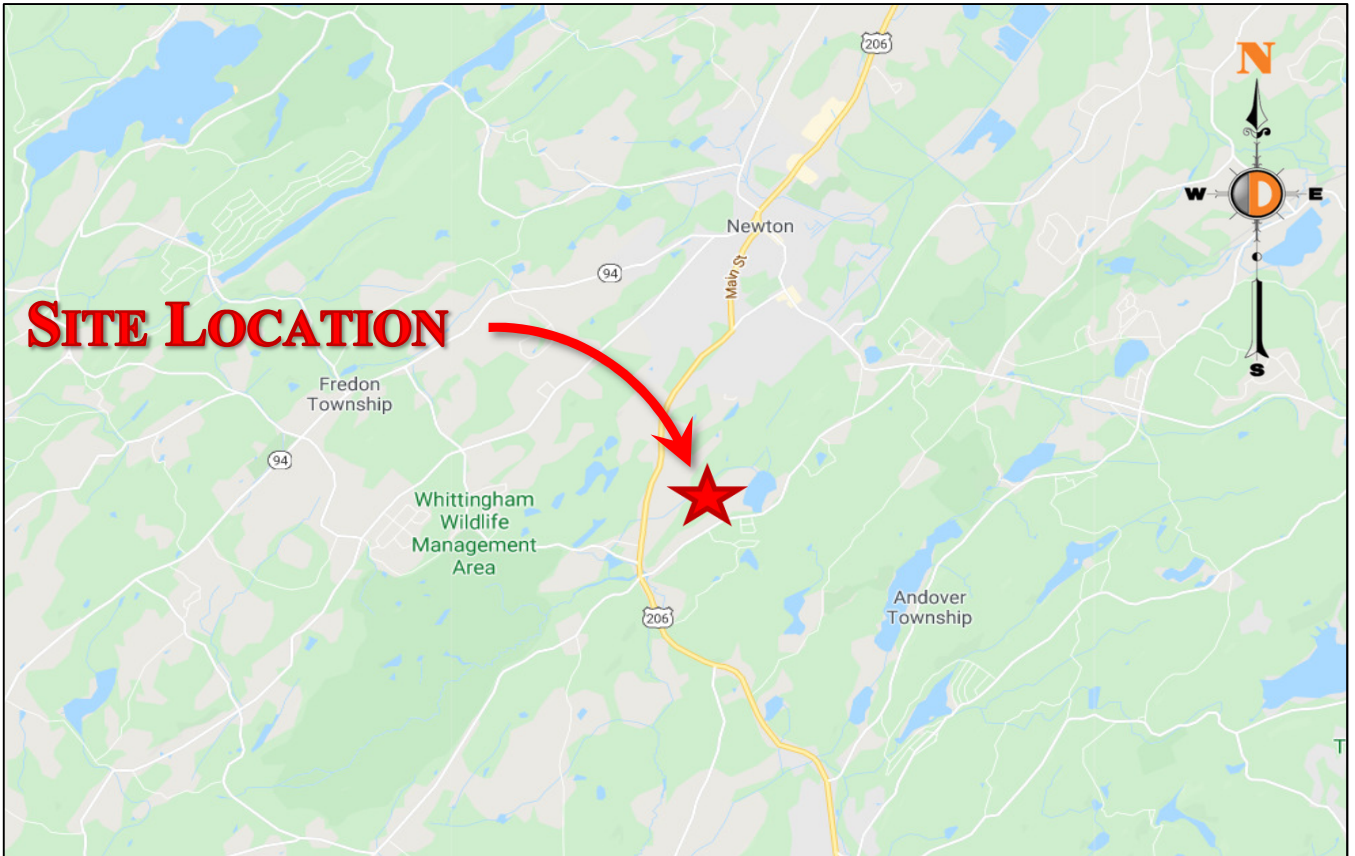
Based upon the detailed analyses as documented herein, the following findings are noted:

- The proposed construction equipment and materials storage facility will generate 29 entering trips and 8 exiting trips during the weekday morning peak hour and 8 entering trips and 29 exiting trips during the evening peak hour that are “new” to the adjacent roadway network.
- Access to the site is proposed to be provided via a left/right turn in/right turn out driveway along Stickles Pond Road.
- With the addition of site generated traffic, the intersection is anticipated to operate at overall intersection levels of service “C” or better during the analyzed peak hours. It should be noted that the westbound left turn/through/right turn movement is anticipated to degrade from No Build level of service “C” to Build level of service “D” during the weekday evening peak hour. However, with the reallocation of 3 seconds of green time from the Route 206 phase to the Greendale Road/Stickles Pond Road phase during the weekday evening peak hour, the No Build level of service can be maintained.
- As designed, the intersection of Stickles Pond Road and the site driveway is anticipated to operate at acceptable levels of service “B” or better during the peak hours studied.
- As proposed, The Project’s site driveways and internal circulation have been designed to provide for safe and efficient movement of automobiles and large wheel base vehicles.
- The proposed parking supply and design is sufficient to support the projected demand and exceeds ITE peak parking demand.

Conclusions

Based upon our Traffic Impact Study as detailed in the body of this report, it is the professional opinion of Dynamic Traffic LLC that the adjacent street system of the New Jersey Department of Transportation, Sussex County, and Andover Township will not experience any significant degradation in operating conditions with the construction of The Project. The site driveway is located to provide safe and efficient access to the adjacent roadway system. The site plan as proposed provides for good circulation throughout the site and provides adequate parking to accommodate The Project’s needs.

Appendix A
Traffic Volume Figures



Proposed Construction Equipment & Materials Storage Facility
Traffic Impact Study
3527-99-001TE
2/4/2021

Figure 1

Site Location Map



US Route 206



Site

Site Driveway

Greendale Road

Stickles Pond Road

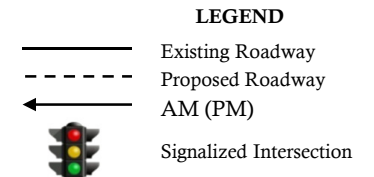
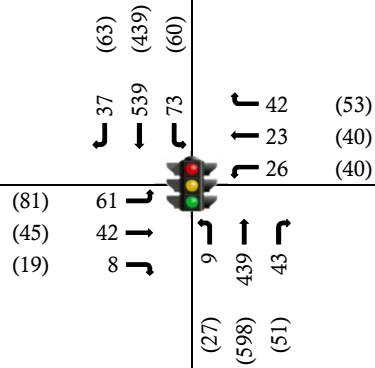


Figure 2

Existing Traffic Volumes

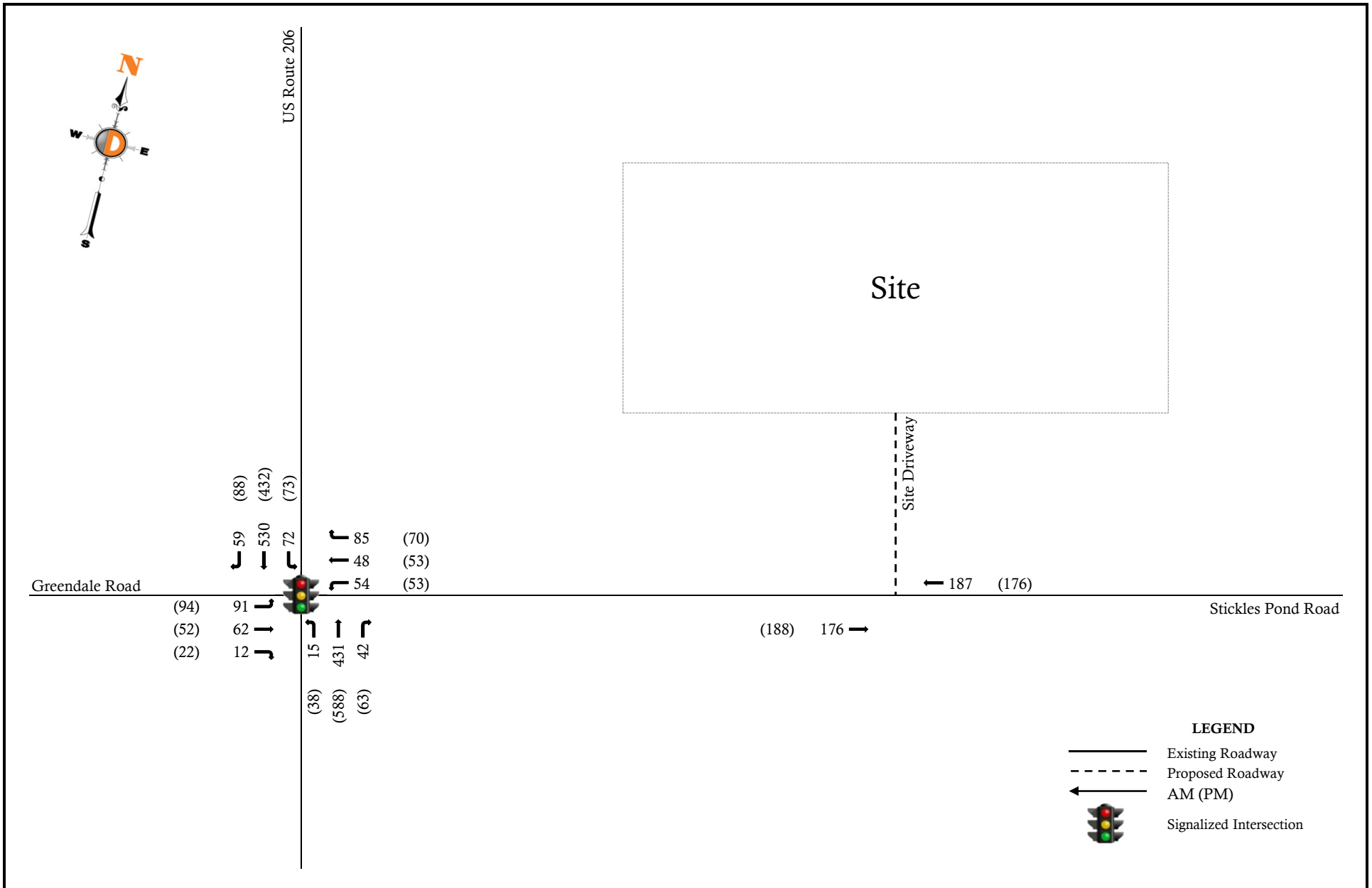
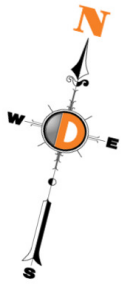


Figure 3

Adjusted Existing Traffic Volumes



US Route 206

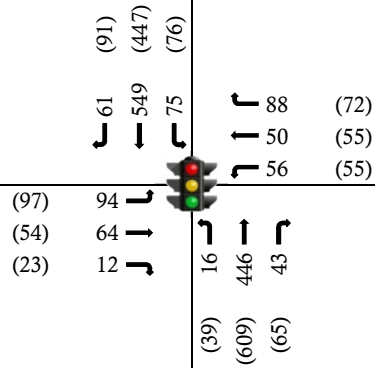


Site

Site Driveway

Greendale Road

Stickles Pond Road



- LEGEND**
- Existing Roadway
 - Proposed Roadway
 - AM (PM)
 - Signalized Intersection



Figure 4

No Build Traffic Volumes

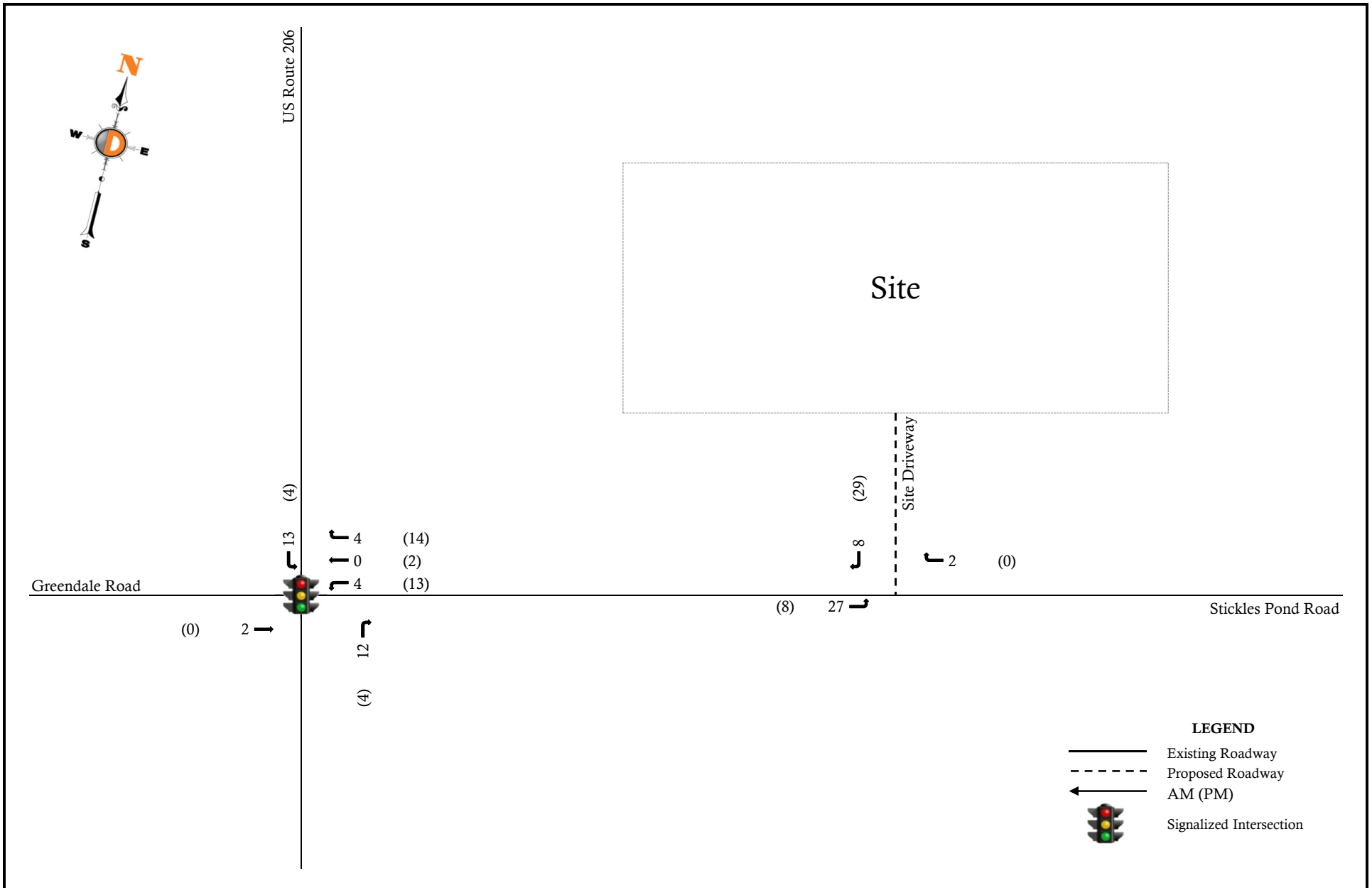
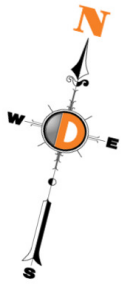


Figure 5

Total Site Generated Trips



US Route 206

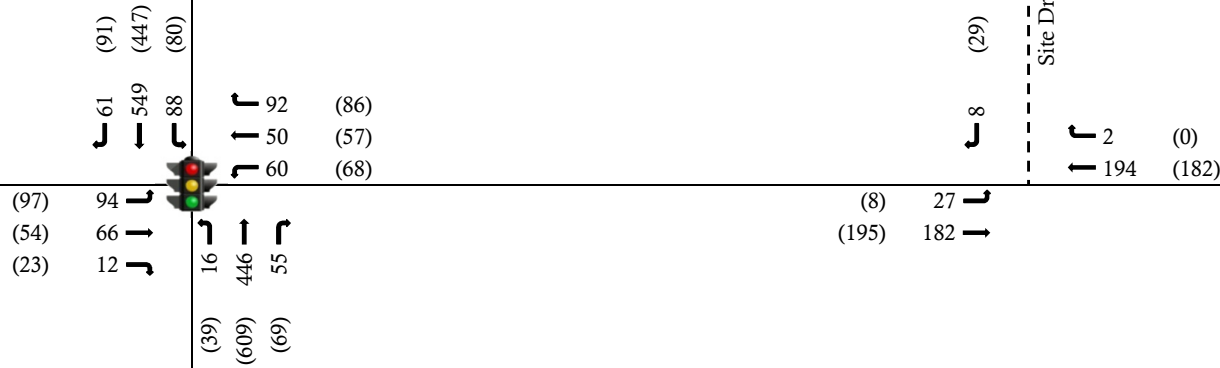


Site

Site Driveway

Greendale Road

Stickles Pond Road



LEGEND





-  Existing Roadway
-  Proposed Roadway
-  AM (PM)
-  Signalized Intersection



Figure 6

Build Traffic Volumes

Appendix B
Project Information

Dynamic Traffic, LLC

1904 Main Street, Lake Como, NJ 07719
 245 Main Street - Suite 110, Chester, NJ 07930
 732-681-0760

E/W: Stickles Pond Rd
 N/S: Rt 206
 Town/County: Andover/Sussex
 Job #: 3527-99-001TE

File Name : Rt 206 and Stickles Pond Rd - AMPM
 Site Code : 00000000
 Start Date : 7/30/2020
 Page No : 1

Groups Printed- Cars - Trucks (SU) - Trucks (TT)

Start Time	Stickles Pond Road (CR 611) Eastbound					Stickles Pond Road (CR 611) Westbound					Route 206 Northbound					Route 206 Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	10	5	3	0	18	2	6	5	0	13	2	65	10	0	77	7	116	6	1	130	238
07:15 AM	14	6	5	0	25	13	4	4	0	21	0	44	6	0	50	14	94	6	0	114	210
07:30 AM	17	12	3	0	32	4	5	9	0	18	3	104	14	0	121	16	137	10	0	163	334
07:45 AM	16	8	1	0	25	10	5	16	0	31	0	99	13	0	112	17	131	10	0	158	326
Total	57	31	12	0	100	29	20	34	0	83	5	312	43	0	360	54	478	32	1	565	1108
08:00 AM	11	12	3	0	26	4	7	8	0	19	5	115	6	0	126	23	118	11	0	152	323
08:15 AM	16	9	1	0	26	8	6	7	0	21	1	113	9	0	123	16	144	5	0	165	335
08:30 AM	13	12	3	0	28	7	3	8	1	19	1	92	5	0	98	21	126	13	0	160	305
08:45 AM	15	15	1	0	31	4	10	9	0	23	1	114	5	0	120	13	107	9	0	129	303
Total	55	48	8	0	111	23	26	32	1	82	8	434	25	0	467	73	495	38	0	606	1266
*** BREAK ***																					
04:30 PM	25	14	5	0	44	8	11	18	0	37	4	150	14	0	168	24	107	15	1	147	396
04:45 PM	18	13	7	0	38	12	10	7	0	29	6	164	10	0	180	9	112	12	0	133	380
Total	43	27	12	0	82	20	21	25	0	66	10	314	24	0	348	33	219	27	1	280	776
05:00 PM	16	8	2	0	26	11	8	13	0	32	9	143	10	0	162	10	96	14	0	120	340
05:15 PM	21	9	5	0	35	8	10	14	0	32	8	131	16	0	155	16	116	21	0	153	375
05:30 PM	12	12	5	0	29	14	5	6	0	25	4	112	10	0	126	6	83	16	0	105	285
05:45 PM	17	13	0	0	30	7	9	13	0	29	1	98	8	0	107	4	63	11	0	78	244
Total	66	42	12	0	120	40	32	46	0	118	22	484	44	0	550	36	358	62	0	456	1244
06:00 PM	10	5	0	0	15	11	6	10	0	27	2	83	7	0	92	7	70	12	0	89	223
06:15 PM	24	10	3	0	37	4	7	18	0	29	4	89	9	0	102	7	54	13	0	74	242
Grand Total	255	163	47	0	465	127	112	165	1	405	51	1716	152	0	1919	210	1674	184	2	2070	4859
Apprch %	54.8	35.1	10.1	0		31.4	27.7	40.7	0.2		2.7	89.4	7.9	0		10.1	80.9	8.9	0.1		
Total %	5.2	3.4	1	0	9.6	2.6	2.3	3.4	0	8.3	1	35.3	3.1	0	39.5	4.3	34.5	3.8	0	42.6	
Cars	251	159	45	0	455	124	110	161	1	396	47	1681	146	0	1874	205	1637	182	2	2026	4751
% Cars	98.4	97.5	95.7	0	97.8	97.6	98.2	97.6	100	97.8	92.2	98	96.1	0	97.7	97.6	97.8	98.9	100	97.9	97.8
Trucks (SU)	4	4	1	0	9	3	2	4	0	9	3	33	6	0	42	5	37	2	0	44	104
% Trucks (SU)	1.6	2.5	2.1	0	1.9	2.4	1.8	2.4	0	2.2	5.9	1.9	3.9	0	2.2	2.4	2.2	1.1	0	2.1	2.1
Trucks (TT)	0	0	1	0	1	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	4
% Trucks (TT)	0	0	2.1	0	0.2	0	0	0	0	0	2	0.1	0	0	0.2	0	0	0	0	0	0.1

1911118

Route US 206 and County Route 611
(Greendale Road)-Relocated Stickles
Pond Road
Andover Twp., Sussex Co.

VARIABLE CYCLES

<u>Movement</u>	<u>Signal Faces</u>		<u>Time</u>	
	<u>1-5</u>	<u>6-10</u>	<u>I</u>	<u>II</u>
A. Route US 206	G	R	45 Min.	30 Min.
Change	Y	R	5	5
Clearance	R	R	2	2
B. County Route 611 - Relocated Stickles Pond Road	R	G	7-17	7-15
Change	R	Y	4	4
Clearance	R	R	2	2
Emergency Flash	Y	R	-	-

The vehicular memory is to be disconnected and the vehicle extension set at 2.0 seconds for Movement B.

Actuation of pedestrian push button is to provide a minimum green time of 15 seconds to Movement B.

The manual control is to be disconnected.

A detector call delay of 8 seconds is to be employed prior to placing a call for Movement B.

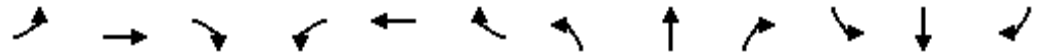
Hours of Operation: Time I: 7 – 9 A.M., 3:30 – 6:30 P.M., Monday – Friday

Time II: All Other Times

Appendix C
Capacity Analysis



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Volume (vph)	92	63	12	54	48	87	15	439	43	73	539	60
Future Volume (vph)	92	63	12	54	48	87	15	439	43	73	539	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	12
Grade (%)		-4%			-2%			4%			4%	
Storage Length (ft)	0		30	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.938			0.988			0.988	
Flt Protected		0.971			0.986			0.999			0.995	
Satd. Flow (prot)	0	1813	1757	0	1699	0	0	1754	0	0	1780	0
Flt Permitted		0.668			0.849			0.976			0.898	
Satd. Flow (perm)	0	1247	1757	0	1463	0	0	1713	0	0	1606	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			58		53							12
Link Speed (mph)		40			35			50			50	
Link Distance (ft)		457			494			688			731	
Travel Time (s)		7.8			9.6			9.4			10.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	5%	0%	4%	4%	5%	22%	4%	7%	4%	3%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	158	12	0	193	0	0	507	0	0	685	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		45.0	45.0		45.0	45.0	
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		52.0	52.0		52.0	52.0	
Total Split (s)	23.0	23.0	23.0	23.0	23.0		52.0	52.0		52.0	52.0	
Total Split (%)	30.7%	30.7%	30.7%	30.7%	30.7%		69.3%	69.3%		69.3%	69.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		12.5	12.5		12.5			46.6			46.6	
Actuated g/C Ratio		0.17	0.17		0.17			0.65			0.65	
v/c Ratio		0.73	0.03		0.65			0.46			0.66	
Control Delay		47.3	0.2		29.9			8.8			12.5	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		47.3	0.2		29.9			8.8			12.5	
LOS		D	A		C			A			B	
Approach Delay		44.0			29.9			8.8			12.5	
Approach LOS		D			C			A			B	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		65	0		56			99			162	
Queue Length 95th (ft)		125	0		118			192			324	
Internal Link Dist (ft)		377			414			608			651	
Turn Bay Length (ft)			30									
Base Capacity (vph)		293	458		385			1106			1041	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.54	0.03		0.50			0.46			0.66	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	72.2
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	16.9
Intersection LOS:	B
Intersection Capacity Utilization	94.5%
ICU Level of Service	F
Analysis Period (min)	15

Splits and Phases: 10: Route 206 & Greendale Road/Stickles Pond Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Volume (vph)	95	53	22	54	54	71	38	598	64	74	440	89
Future Volume (vph)	95	53	22	54	54	71	38	598	64	74	440	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	12
Grade (%)		-4%			-2%			4%			4%	
Storage Length (ft)	0		30	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.946			0.988			0.980	
Flt Protected		0.969			0.985			0.997			0.994	
Satd. Flow (prot)	0	1866	1757	0	1774	0	0	1815	0	0	1783	0
Flt Permitted		0.657			0.842			0.945			0.841	
Satd. Flow (perm)	0	1265	1757	0	1516	0	0	1721	0	0	1509	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			58		41							21
Link Speed (mph)		40			35			50			50	
Link Distance (ft)		457			494			688			731	
Travel Time (s)		7.8			9.6			9.4			10.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	0%	0%	0%	0%	2%	0%	1%	2%	2%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	157	23	0	190	0	0	744	0	0	642	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		45.0	45.0		45.0	45.0	
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		52.0	52.0		52.0	52.0	
Total Split (s)	23.0	23.0	23.0	23.0	23.0		52.0	52.0		52.0	52.0	
Total Split (%)	30.7%	30.7%	30.7%	30.7%	30.7%		69.3%	69.3%		69.3%	69.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		12.4	12.4		12.4			46.7			46.7	
Actuated g/C Ratio		0.17	0.17		0.17			0.65			0.65	
v/c Ratio		0.72	0.07		0.64			0.67			0.65	
Control Delay		46.5	1.7		31.5			12.6			12.4	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		46.5	1.7		31.5			12.6			12.4	
LOS		D	A		C			B			B	
Approach Delay		40.7			31.5			12.6			12.4	
Approach LOS		D			C			B			B	





















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		65	0		60			180			147	
Queue Length 95th (ft)		124	4		121			354			305	
Internal Link Dist (ft)		377			414			608			651	
Turn Bay Length (ft)			30									
Base Capacity (vph)		298	458		388			1114			984	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.53	0.05		0.49			0.67			0.65	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	72.2
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	17.5
Intersection LOS:	B
Intersection Capacity Utilization	82.3%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 10: Route 206 & Greendale Road/Stickles Pond Road

 02 52 s	 04 23 s
 06 52 s	 08 23 s

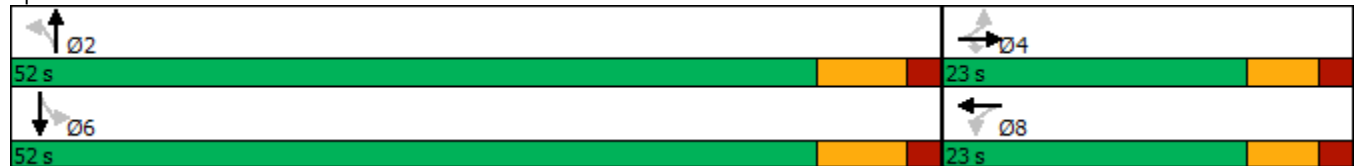
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	65	12	56	50	90	16	454	45	76	558	62
Future Volume (vph)	95	65	12	56	50	90	16	454	45	76	558	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	12
Grade (%)		-4%			-2%			4%			4%	
Storage Length (ft)	0		30	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.938			0.988			0.988	
Flt Protected		0.971			0.986			0.998			0.995	
Satd. Flow (prot)	0	1813	1757	0	1699	0	0	1752	0	0	1780	0
Flt Permitted		0.659			0.847			0.974			0.892	
Satd. Flow (perm)	0	1230	1757	0	1460	0	0	1710	0	0	1596	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			58		53							12
Link Speed (mph)		40			35			50			50	
Link Distance (ft)		457			494			688			731	
Travel Time (s)		7.8			9.6			9.4			10.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	5%	0%	4%	4%	5%	22%	4%	7%	4%	3%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	12	0	200	0	0	525	0	0	710	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		45.0	45.0		45.0	45.0	
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		52.0	52.0		52.0	52.0	
Total Split (s)	23.0	23.0	23.0	23.0	23.0		52.0	52.0		52.0	52.0	
Total Split (%)	30.7%	30.7%	30.7%	30.7%	30.7%		69.3%	69.3%		69.3%	69.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		12.9	12.9		12.9			46.4			46.4	
Actuated g/C Ratio		0.18	0.18		0.18			0.64			0.64	
v/c Ratio		0.75	0.03		0.66			0.48			0.69	
Control Delay		48.5	0.2		30.6			9.2			13.6	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		48.5	0.2		30.6			9.2			13.6	
LOS		D	A		C			A			B	
Approach Delay		45.2			30.6			9.2			13.6	
Approach LOS		D			C			A			B	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		68	0		59			107			178	
Queue Length 95th (ft)		130	0		123			201			350	
Internal Link Dist (ft)		377			414			608			651	
Turn Bay Length (ft)			30									
Base Capacity (vph)		289	458		384			1098			1029	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.56	0.03		0.52			0.48			0.69	

Intersection Summary	
Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	72.3
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	17.7
Intersection LOS:	B
Intersection Capacity Utilization	97.0%
ICU Level of Service	F
Analysis Period (min)	15

Splits and Phases: 10: Route 206 & Greendale Road/Stickles Pond Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Volume (vph)	98	55	23	56	56	74	39	619	66	77	456	92
Future Volume (vph)	98	55	23	56	56	74	39	619	66	77	456	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	12
Grade (%)		-4%			-2%			4%			4%	
Storage Length (ft)	0		30	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.946			0.988			0.980	
Flt Protected		0.969			0.985			0.997			0.994	
Satd. Flow (prot)	0	1866	1757	0	1774	0	0	1815	0	0	1783	0
Flt Permitted		0.648			0.839			0.943			0.834	
Satd. Flow (perm)	0	1248	1757	0	1511	0	0	1717	0	0	1496	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			58		41							21
Link Speed (mph)		40			35			50			50	
Link Distance (ft)		457			494			688			731	
Travel Time (s)		7.8			9.6			9.4			10.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	0%	0%	0%	0%	2%	0%	1%	2%	2%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	24	0	199	0	0	770	0	0	665	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		45.0	45.0		45.0	45.0	
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		52.0	52.0		52.0	52.0	
Total Split (s)	23.0	23.0	23.0	23.0	23.0		52.0	52.0		52.0	52.0	
Total Split (%)	30.7%	30.7%	30.7%	30.7%	30.7%		69.3%	69.3%		69.3%	69.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		12.8	12.8		12.8			46.4			46.4	
Actuated g/C Ratio		0.18	0.18		0.18			0.64			0.64	
v/c Ratio		0.74	0.07		0.66			0.70			0.69	
Control Delay		47.9	2.0		32.4			13.6			13.6	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		47.9	2.0		32.4			13.6			13.6	
LOS		D	A		C			B			B	
Approach Delay		42.0			32.4			13.6			13.6	
Approach LOS		D			C			B			B	





















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		68	0		64			197			162	
Queue Length 95th (ft)		129	5		128			379			330	
Internal Link Dist (ft)		377			414			608			651	
Turn Bay Length (ft)			30									
Base Capacity (vph)		293	458		387			1104			969	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.56	0.05		0.51			0.70			0.69	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	72.2
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	18.6
Intersection LOS:	B
Intersection Capacity Utilization	84.9%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 10: Route 206 & Greendale Road/Stickles Pond Road



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	67	12	60	50	94	16	454	57	89	558	62
Future Volume (vph)	95	67	12	60	50	94	16	454	57	89	558	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	12
Grade (%)		-4%			-2%			4%			4%	
Storage Length (ft)	0		30	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.938			0.985			0.988	
Flt Protected		0.971			0.986			0.999			0.994	
Satd. Flow (prot)	0	1820	1757	0	1635	0	0	1738	0	0	1767	0
Flt Permitted		0.653			0.842			0.974			0.871	
Satd. Flow (perm)	0	1224	1757	0	1397	0	0	1695	0	0	1548	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			58		53							11
Link Speed (mph)		40			35			50			50	
Link Distance (ft)		457			494			688			731	
Travel Time (s)		7.8			9.6			9.4			10.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	4%	0%	10%	4%	10%	22%	4%	12%	9%	3%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	165	12	0	208	0	0	537	0	0	723	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		45.0	45.0		45.0	45.0	
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		52.0	52.0		52.0	52.0	
Total Split (s)	23.0	23.0	23.0	23.0	23.0		52.0	52.0		52.0	52.0	
Total Split (%)	30.7%	30.7%	30.7%	30.7%	30.7%		69.3%	69.3%		69.3%	69.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		13.0	13.0		13.0			46.2			46.2	
Actuated g/C Ratio		0.18	0.18		0.18			0.64			0.64	
v/c Ratio		0.75	0.03		0.71			0.49			0.73	
Control Delay		49.0	0.2		33.8			9.6			15.3	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		49.0	0.2		33.8			9.6			15.3	
LOS		D	A		C			A			B	
Approach Delay		45.7			33.8			9.6			15.3	
Approach LOS		D			C			A			B	

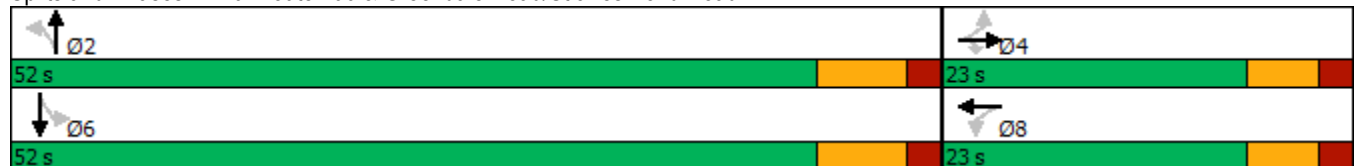


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		69	0		63			113			191	
Queue Length 95th (ft)		#133	0		131			210			379	
Internal Link Dist (ft)		377			414			608			651	
Turn Bay Length (ft)			30									
Base Capacity (vph)		288	458		369			1085			994	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.57	0.03		0.56			0.49			0.73	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	72.2
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	19.0
Intersection LOS:	B
Intersection Capacity Utilization:	104.4%
ICU Level of Service:	G
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 10: Route 206 & Greendale Road/Stickles Pond Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	55	23	69	58	88	39	619	70	81	456	92
Future Volume (vph)	98	55	23	69	58	88	39	619	70	81	456	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	12
Grade (%)		-4%			-2%			4%			4%	
Storage Length (ft)	0		30	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.945			0.987			0.980	
Flt Protected		0.969			0.984			0.997			0.994	
Satd. Flow (prot)	0	1866	1757	0	1704	0	0	1805	0	0	1772	0
Flt Permitted		0.612			0.832			0.943			0.825	
Satd. Flow (perm)	0	1179	1757	0	1441	0	0	1707	0	0	1471	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			58		43							21
Link Speed (mph)		40			35			50			50	
Link Distance (ft)		457			494			688			731	
Travel Time (s)		7.8			9.6			9.4			10.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	0%	0%	7%	0%	6%	0%	1%	7%	7%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	24	0	229	0	0	774	0	0	669	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		45.0	45.0		45.0	45.0	
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		52.0	52.0		52.0	52.0	
Total Split (s)	23.0	23.0	23.0	23.0	23.0		52.0	52.0		52.0	52.0	
Total Split (%)	30.7%	30.7%	30.7%	30.7%	30.7%		69.3%	69.3%		69.3%	69.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		13.1	13.1		13.1			45.9			45.9	
Actuated g/C Ratio		0.18	0.18		0.18			0.64			0.64	
v/c Ratio		0.76	0.07		0.77			0.71			0.71	
Control Delay		50.5	2.0		40.2			14.3			14.6	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		50.5	2.0		40.2			14.3			14.6	
LOS		D	A		D			B			B	
Approach Delay		44.3			40.2			14.3			14.6	
Approach LOS		D			D			B			B	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		68	0		78			206			171	
Queue Length 95th (ft)		#142	5		#152			386			343	
Internal Link Dist (ft)		377			414			608			651	
Turn Bay Length (ft)			30									
Base Capacity (vph)		278	459		373			1087			945	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.59	0.05		0.61			0.71			0.71	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	72
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	20.6
Intersection LOS:	C
Intersection Capacity Utilization	88.2%
ICU Level of Service	E
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 10: Route 206 & Greendale Road/Stickles Pond Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	55	23	69	58	88	39	619	70	81	456	92
Future Volume (vph)	98	55	23	69	58	88	39	619	70	81	456	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	12	12	12	12	12	12	12	12	12
Grade (%)		-4%			-2%			4%			4%	
Storage Length (ft)	0		30	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.945			0.987			0.980	
Flt Protected		0.969			0.984			0.997			0.994	
Satd. Flow (prot)	0	1866	1757	0	1704	0	0	1805	0	0	1772	0
Flt Permitted		0.626			0.832			0.943			0.829	
Satd. Flow (perm)	0	1205	1757	0	1441	0	0	1707	0	0	1478	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)			58		46							19
Link Speed (mph)		40			35			50			50	
Link Distance (ft)		457			494			688			731	
Travel Time (s)		7.8			9.6			9.4			10.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	0%	0%	7%	0%	6%	0%	1%	7%	7%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	24	0	229	0	0	774	0	0	669	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		42.0	42.0		42.0	42.0	
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0		49.0	49.0		49.0	49.0	
Total Split (s)	26.0	26.0	26.0	26.0	26.0		49.0	49.0		49.0	49.0	
Total Split (%)	34.7%	34.7%	34.7%	34.7%	34.7%		65.3%	65.3%		65.3%	65.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		13.2	13.2		13.2			43.0			43.0	
Actuated g/C Ratio		0.19	0.19		0.19			0.62			0.62	
v/c Ratio		0.71	0.06		0.73			0.73			0.72	
Control Delay		42.9	1.8		34.8			16.0			16.2	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		42.9	1.8		34.8			16.0			16.2	
LOS		D	A		C			B			B	
Approach Delay		37.6			34.8			16.0			16.2	
Approach LOS		D			C			B			B	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		64	0		72			199			165	
Queue Length 95th (ft)		123	5		141			#462			#441	
Internal Link Dist (ft)		377			414			608			651	
Turn Bay Length (ft)			30									
Base Capacity (vph)		349	550		450			1059			924	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.47	0.04		0.51			0.73			0.72	

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 69.2

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 20.6

Intersection LOS: C

Intersection Capacity Utilization 88.2%

ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Route 206 & Greendale Road/Stickles Pond Road



Intersection

Int Delay, s/veh 0.7

Movement EBL EBT WBT WBR SBL SBRLane Configurations 

Traffic Vol, veh/h 27 186 196 2 0 8

Future Vol, veh/h 27 186 196 2 0 8

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Free Free Free Free Stop Stop

RT Channelized - None - None - None

Storage Length - - - - - 0

Veh in Median Storage, # - 0 0 - 0 -

Grade, % - 4 -4 - 0 -

Peak Hour Factor 88 88 88 88 88 88

Heavy Vehicles, % 33 4 2 0 2 100

Mvmt Flow 31 211 223 2 0 9

Major/Minor Major1 Major2 Minor2

Conflicting Flow All 225 0 - 0 - 224

Stage 1 - - - - -

Stage 2 - - - - -

Critical Hdwy 4.43 - - - - 7.2

Critical Hdwy Stg 1 - - - - -

Critical Hdwy Stg 2 - - - - -

Follow-up Hdwy 2.497 - - - - 4.2

Pot Cap-1 Maneuver 1181 - - - 0 622

Stage 1 - - - - 0 -

Stage 2 - - - - 0 -

Platoon blocked, % - - - -

Mov Cap-1 Maneuver 1181 - - - - 622

Mov Cap-2 Maneuver - - - - -

Stage 1 - - - - -

Stage 2 - - - - -

Approach EB WB SB

HCM Control Delay, s 1 0 10.9

HCM LOS B

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h) 1181 - - - 622

HCM Lane V/C Ratio 0.026 - - - 0.015

HCM Control Delay (s) 8.1 0 - - 10.9

HCM Lane LOS A A - - B

HCM 95th %tile Q(veh) 0.1 - - - 0

Intersection

Int Delay, s/veh 0.8

Movement EBL EBT WBT WBR SBL SBRLane Configurations 

Traffic Vol, veh/h 8 198 186 0 0 29

Future Vol, veh/h 8 198 186 0 0 29

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Free Free Free Free Stop Stop

RT Channelized - None - None - None

Storage Length - - - - - 0

Veh in Median Storage, # - 0 0 - 0 -

Grade, % - 4 -4 - 0 -

Peak Hour Factor 79 79 79 79 79 79

Heavy Vehicles, % 100 1 1 0 2 31

Mvmt Flow 10 251 235 0 0 37

Major/Minor Major1 Major2 Minor2

Conflicting Flow All 235 0 - 0 - 235

Stage 1 - - - - -

Stage 2 - - - - -

Critical Hdwy 5.1 - - - - 6.51

Critical Hdwy Stg 1 - - - - -

Critical Hdwy Stg 2 - - - - -

Follow-up Hdwy 3.1 - - - - 3.579

Pot Cap-1 Maneuver 920 - - - 0 737

Stage 1 - - - - 0 -

Stage 2 - - - - 0 -

Platoon blocked, % - - - -

Mov Cap-1 Maneuver 920 - - - - 737

Mov Cap-2 Maneuver - - - - -

Stage 1 - - - - -

Stage 2 - - - - -

Approach EB WB SB

HCM Control Delay, s 0.3 0 10.1

HCM LOS B

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h) 920 - - - 737

HCM Lane V/C Ratio 0.011 - - - 0.05

HCM Control Delay (s) 9 0 - - 10.1

HCM Lane LOS A A - - B

HCM 95th %tile Q(veh) 0 - - - 0.2

Andover Township, NJ Construction Business Office and Construction Equipment and Material Storage

PARCELS: Lot: 21 TaxBlock: 151

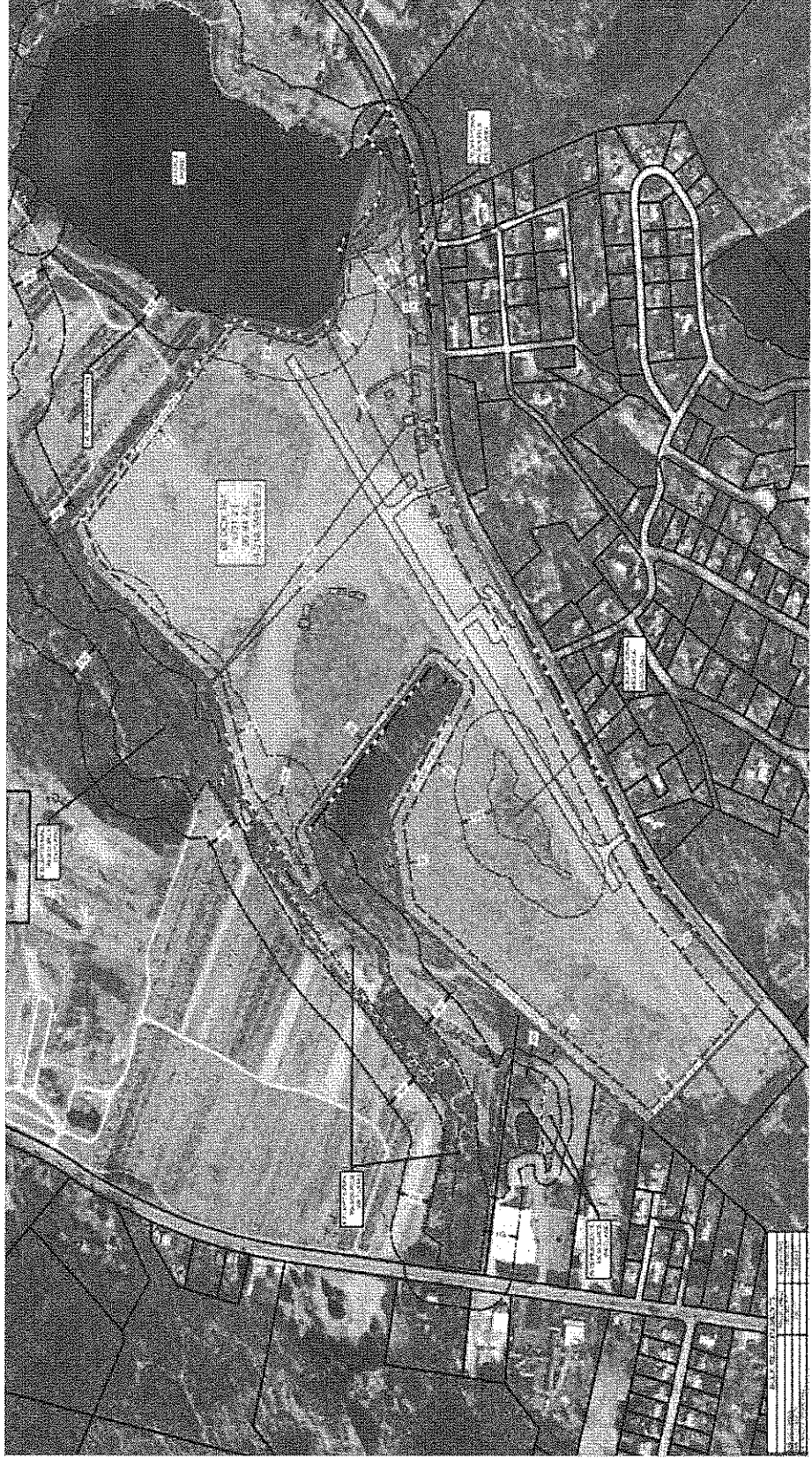


Table of Contents

Property Information	3
Site Plan	4
Construction Materials	5
Construction Equipment	6
Site Operations	7

PROPERTY INFORMATION

52 Stickle's Pond Road, Newton NJ, 07860

Sussex County

Parcel ID **Lot: 21 Tax Block: 151**

Acres **97 Acres**

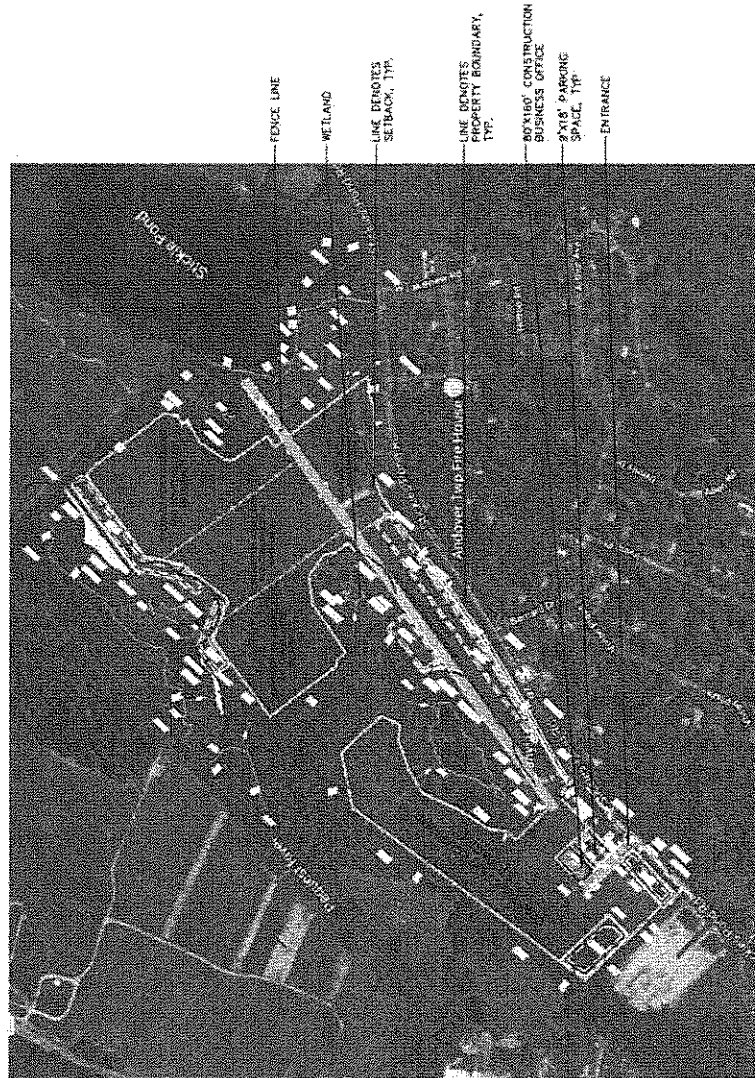
Usable Acres: **48 Acres**

Proposed Use:

Outdoor storage facility of special order and ordinary construction materials and equipment like; bulldozer, earthmovers, asphalt millings, crushed stone, piping, etc., will be stored onsite. A construction business office and receiving area and staff parking will be included.



SITE PLAN

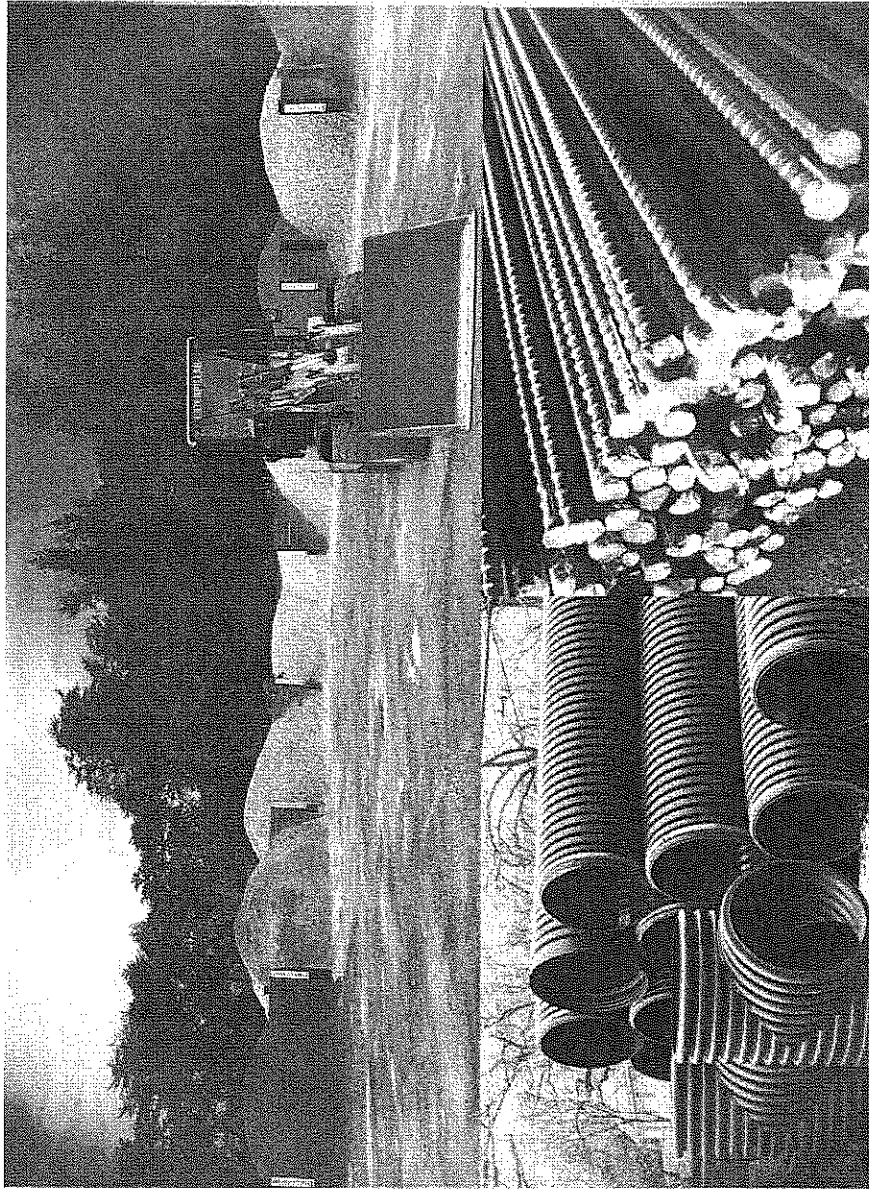


RELIANCE SITE PLAN
 1" = 100' (AS SHOWN ON THIS PLAN, ALL DIMENSIONS ARE APPROXIMATE)

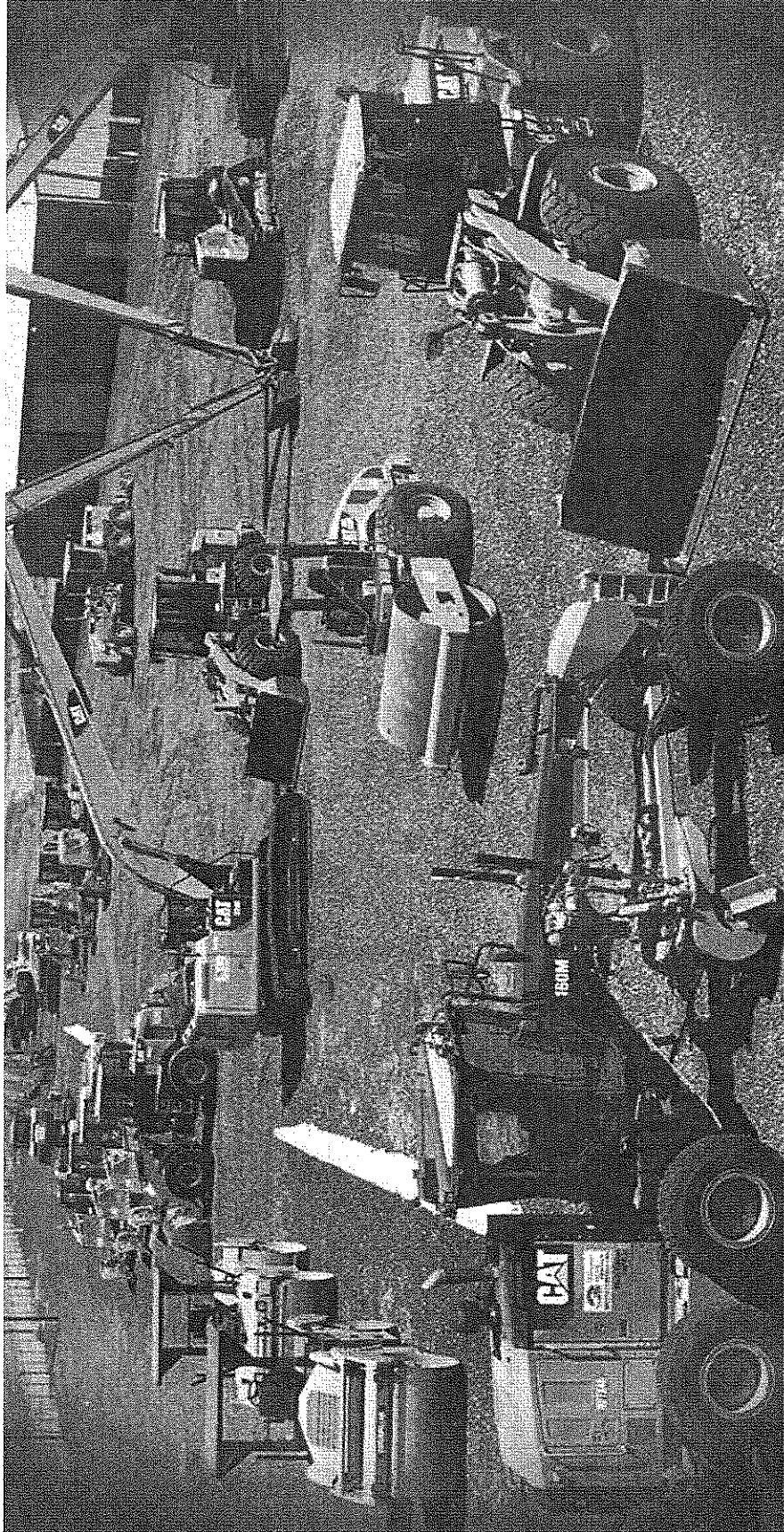
BHT ANDOVER, NJ 1000 Highway 206, Andover, NJ 07003 (908) 683-1111	Project No. _____ Drawing No. _____	Date: _____
---------------------------------------------------------------------------------	----------------------------------------	-------------

BHT DESIGN GROUP

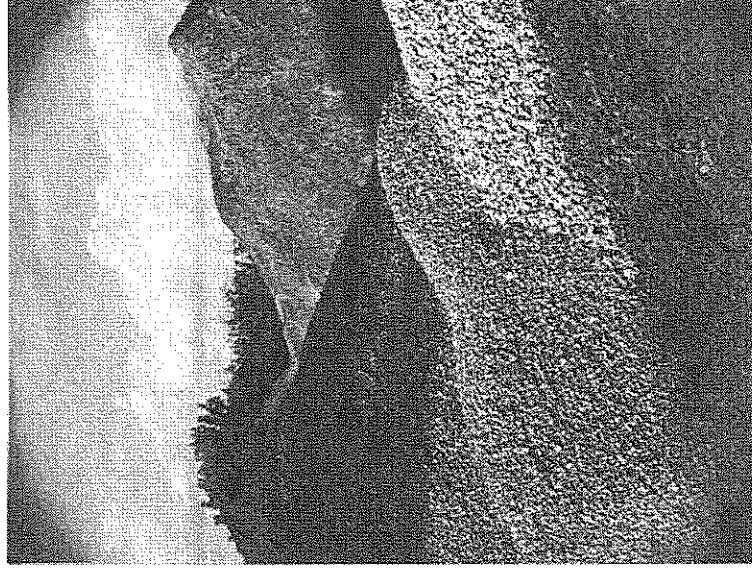
Construction Materials



Construction Equipment



Site Operations



Business Hours of Operation:
Monday through Friday, 8am to 5pm.

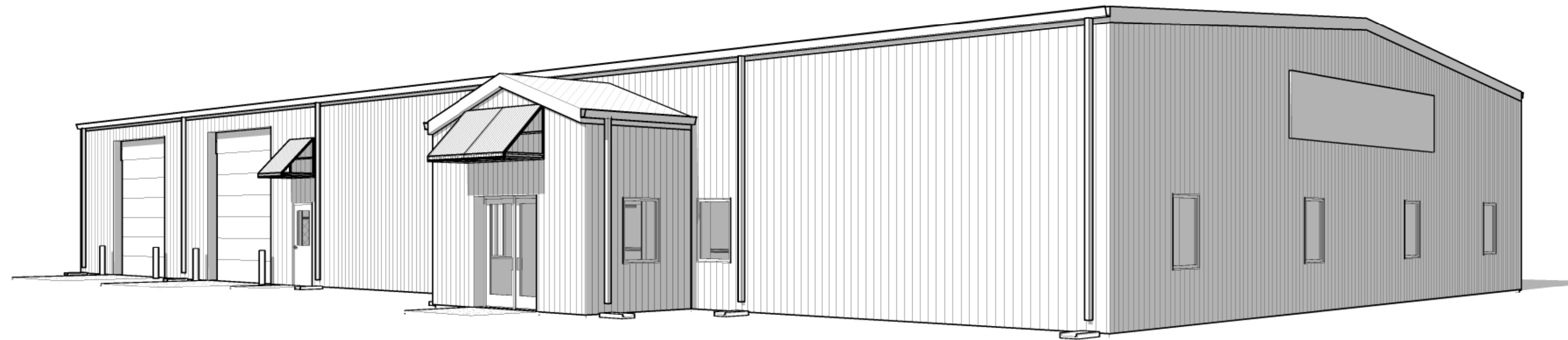
Trip Generation: We estimate roughly 150 trips a day

Career and Employment Opportunities: We estimate 10 - 20 full-time employees, salaried management position and standard hourly wages.

INSURANCE AUTO AUCTIONS

430 TWO NOTCH RD.
LEXINGTON, SC 29073

NEW CONSTRUCTION



NOTE: IMAGE SHOWN FOR REPRESENTATIONAL PURPOSES ONLY

PROJECT DATA

BUILDING CODE SUMMARY

LEXINGTON, SOUTH CAROLINA	1 STORY / PRE-ENGINEERED METAL BUILDING (PEMB)
TYPE OF CONSTRUCTION: TYPE II-B / NON SPRINKLED (NS)	AREA: 8,259 S.F. (GROSS) / 17,500 ALLOWABLE
OCCUPANCY: GROUP B (BUSINESS)	BUILDING HEIGHT: 18'-10" (1 STORY) / 2 STORIES ALLOWABLE
APPLICABLE CODES:	
BUILDING CODE:	2018 INTERNATIONAL BUILDING CODE (IBC)
FUEL AND GAS CODE:	2018 INTERNATIONAL FIRE AND GAS CODE
MECHANICAL CODE:	2018 INTERNATIONAL MECHANICAL CODE (IMC)
PLUMBING CODE:	2018 INTERNATIONAL PLUMBING CODE (IPC)
ACCESSIBILITY CODE:	2017 ICC A117.1
ENERGY CODE:	2009 INTERNATIONAL ENERGY CONSERVATION CODE
ELECTRICAL CODE:	2017 NATIONAL ELECTRIC CODE (NFPA-70)
FIRE CODE:	2018 INTERNATIONAL FIRE CODE(IFC)
LIFE SAFETY CODE:	2018 NFPA 101 LIFE SAFETY CODE
APPLICABLE:	AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) CITY OF LEXINGTON ADOPTED CODE(S) & ORDINANCES(S) AND ALL LOCAL AMENDMENTS AND CITATION
ZONING:	TBD

FIRE-RESISTANCE RATINGS NOTE(S)

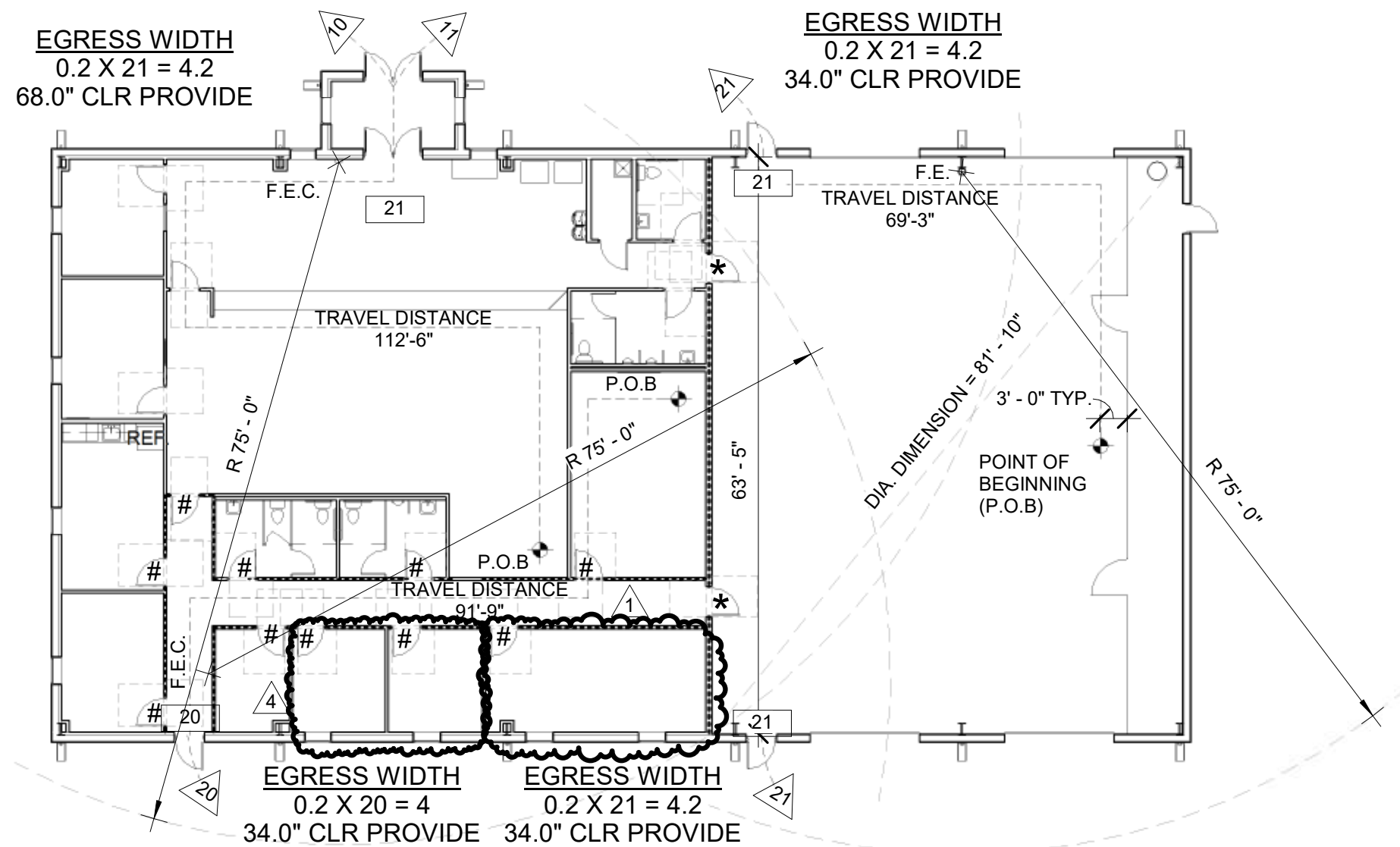
BUILDING ELEMENT	HOURS	NOTE(S)
PRIMARY STRUCTURAL FRAME	0	- CORRIDOR WIDTH: NOT LESS THAN 44" (60" CLR. PROVIDED)
BEARING WALLS		- PORTABLE FIRE EXTINGUISHERS ARE SHOWN ON PLANS
EXTERIOR	0	- MINIMUM NO. OF EXITS - 2 (5 PROVIDED)
INTERIOR	0	- MAXIMUM EXIT ACCESS TRAVEL DISTANCE = 200 FT. / NS
NONBEARING WALLS		- MAXIMUM COMMON PATH OF EGRESS TRAVEL = >30 / 75 FT.
EXTERIOR	0	- PLUMBING: WATER CLOSETS
INTERIOR	0	83 OCC. / 1 PER 100 = 1
CORRIDOR	1	LAVATORIES
FLOOR CONSTRUCTION	0	83 OCC. / 1 PER 100 = 1
ROOF CONSTRUCTION	0	DRINKING FOUNTAINS
		83 OCC. / 1 PER 400 = 1
		SERVICE SINK
		1 SERVICE SINK

OCCUPANT LOADS

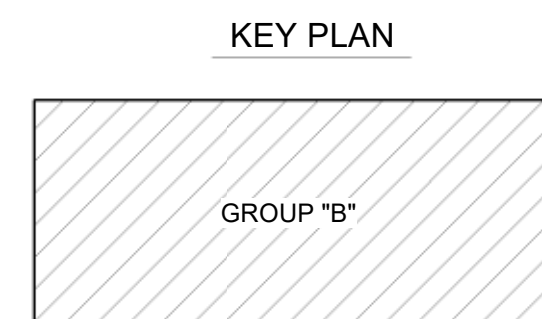
OCCUPANCY CLASSIFICATION AND OCCUPANCY LOADS
CHAPTER 3 - SECTION 302 & 304 / SECTION 1004.1 - TABLE 1004.1.2

TOTAL OCCUPANCY: 83 OCCUPANTS (OCC.)

GROUP B - BUSINESS (OFFICE / MOTOR VEHICLE SHOW ROOM) = 100 GROSS
8,259 SF / 100 = 83 OCC.



① LIFE SAFTEY PLAN
1/16" = 1'-0"



LIFESAFETY LEGEND	
XX	OCCUPANT LOAD (PER SPACE)
△	SUMMATION OF LOADS
---	LINE OF TRAVEL
---	1 HR FIRE RATING (★ 3/4 HR. RATED DOOR) (# 20 MIN. RATED DOOR)
□	FIRE EXTINGUISHER (F.E.C)
○	FIRE EXTINGUISHER (F.E)
+	POINT OF BEGINNING (P.O.B)

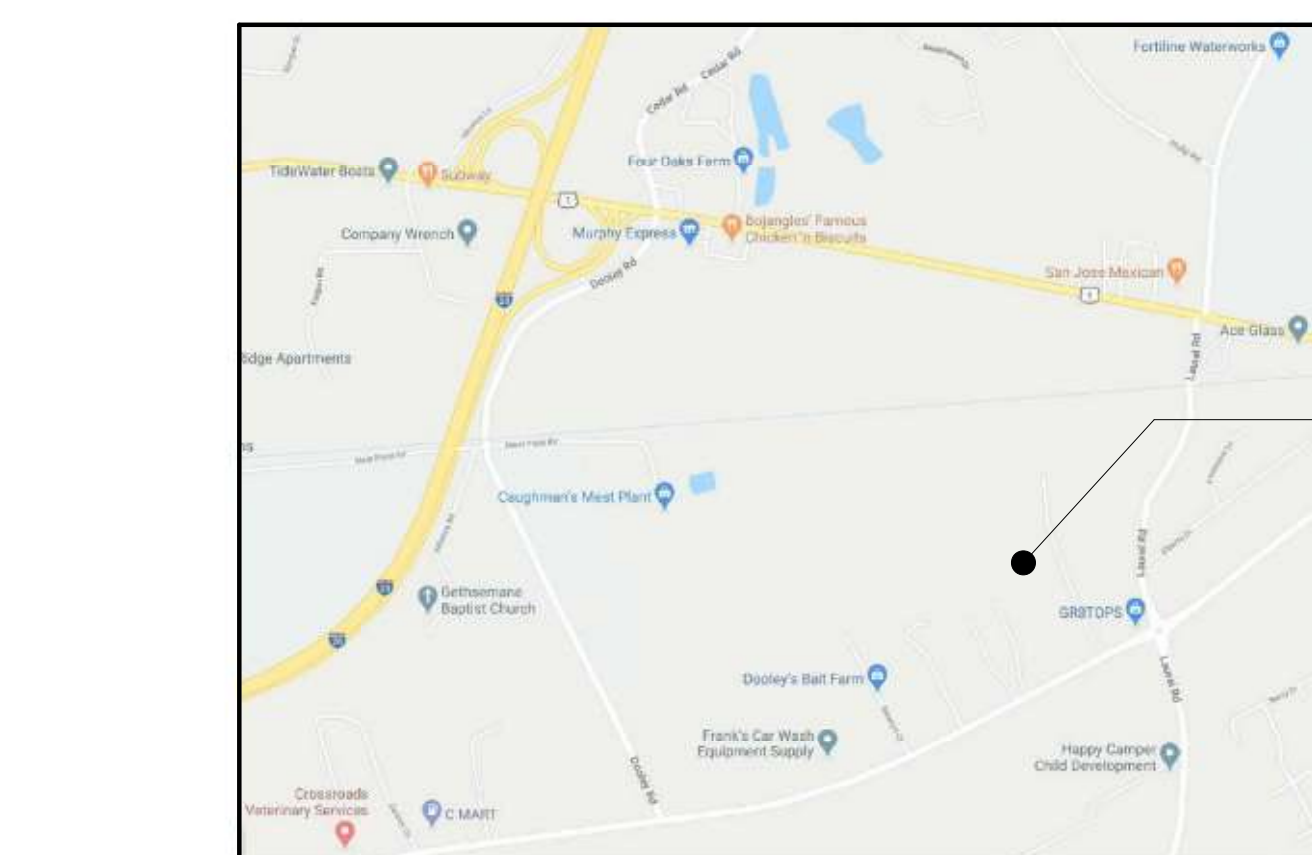
**MAXIMUM
OCCUPANCY
23 PERSONS**

③ MAX. OCCUPANCY SIGN
@ CONF. / TRAINING ROOM
12" = 1'-0"

NOTE:
IBC - 303.1.2 Small assembly spaces. The following rooms and spaces shall not be classified as Assembly occupancies.
1. A room or space used for assembly purposes with an occupant load of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.
2. A room or space used for assembly purposes that is less than 750 square feet (70m sq.) in area and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.

THF PROJECT #2019-25

INDEX OF DRAWINGS			
SHEET #	SHEET TITLE	ISSUED	REV. DATE
COVER	PROJECT DATA / INFORMATION	05/13/20	02/05/21
CIVIL	AREA & GRADING PLAN - LAND DISTURBANCE	04/10/20	08/11/20
A1.0	FLOOR PLAN & REFLECTED CEILING PLAN	05/13/20	02/05/21
A1.1	NOTED / FINISH FLOOR PLAN	05/13/20	02/05/21
A2.1	EXTERIOR ELEVATIONS & DETAILS	05/13/20	02/05/21
A2.2	VIC FLOOR PLAN, SECTION & DETAILS	05/13/20	11/04/20
A3.1	OVERALL BUILDING SECTIONS & DETAILS	05/13/20	
A3.2	STEEL FRAMING DETAILS	05/13/20	
A4.1	SCHEDULES & DETAILS	05/13/20	02/05/21
A4.2	SECTIONS, ELEVATIONS & DETAILS	05/13/20	
A5.0	TYPICAL FENCE DETAILS	05/13/20	
A5.1	TYPICAL PENETRATION DETAILS	05/13/20	
S1.0	REQUIRED IBC SPECIAL INSPECTIONS	05/13/20	
S1.1	FOUNDATION GENERAL NOTES & TYP. DETAILS	05/13/20	
S2.1	FOUNDATION PLAN	05/13/20	
S4.1	FOUNDATION DETAILS	05/13/20	
P.E.M.B.	P.E.M.B. (DEFERRED SUBMITTAL)	XX/XX/XX	
P1.0	PLUMBING PLANS	05/13/20	11/04/20
P2.1	PLUMBING SCHEDULES AND DETAILS	05/13/20	
P2.2	PLUMBING DETAILS	05/13/20	11/04/20
M1.0	MECHANICAL PLAN	05/13/20	02/05/21
M2.1	MECHANICAL NOTES AND DETAILS	05/13/20	
M2.2	MECHANICAL SCHEDULES	05/13/20	
E0.1	ELECTRICAL SITE PLAN	05/13/20	09/02/20
E1.0	ELECTRICAL PLANS	05/13/20	02/05/21
E1.2	V.I.C. & M/C ELECTRICAL PLANS	05/13/20	
E2.1	ELECTRICAL SCHEDULES AND NOTES	05/13/20	
E2.2	ELECTRICAL LIGHTING SCHEDULES AND DETAILS	05/13/20	
E2.3	ELECTRICAL PANEL SCHEDULES	05/13/20	09/02/20

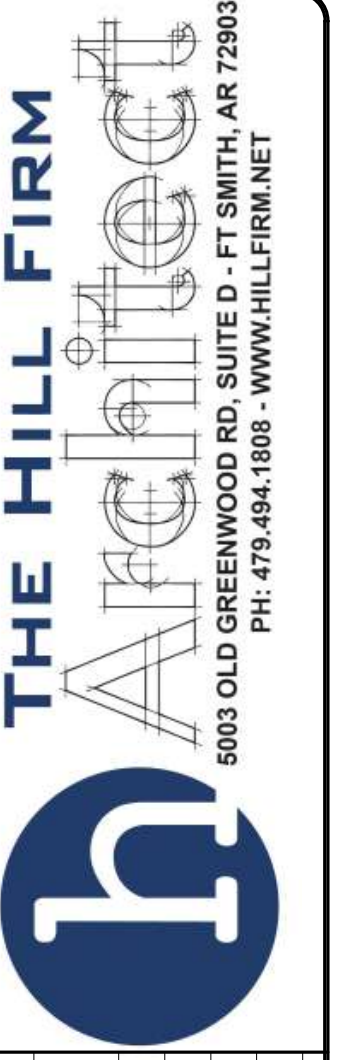


VICINITY MAP

ENGINEER(S):

TATUM SMITH WELCHER
STRUCTURAL ENGINEERS
3100 S Market Street, Suite 202
Rogers, Arkansas 72758
(479) 621-6128
rmw@tatumsmith.com

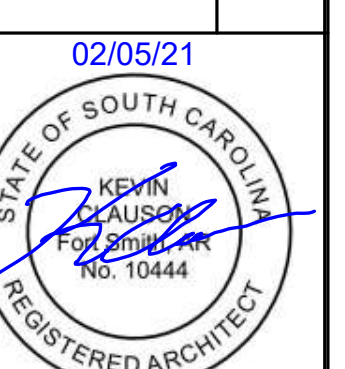
GREG ANDERSON
9 West 26th Circle
Fayetteville, AR 72701
P:(479)601-3331 / ga@gaengr.com



DATE	COMMENTS
08/11/20	CIVIL & PLAN MODIFICATIONS
09/02/20	ADD SECURITY CAMERAS ON SITE
11/04/20	PLUMBING COORDINATION
02/05/21	PLAN MODIFICATIONS

Insurance Auto Auction, Inc.
430 Two Notch Rd.
Lexington, South Carolina 29073

PERMIT - CONSTRUCTION DOCUMENTS

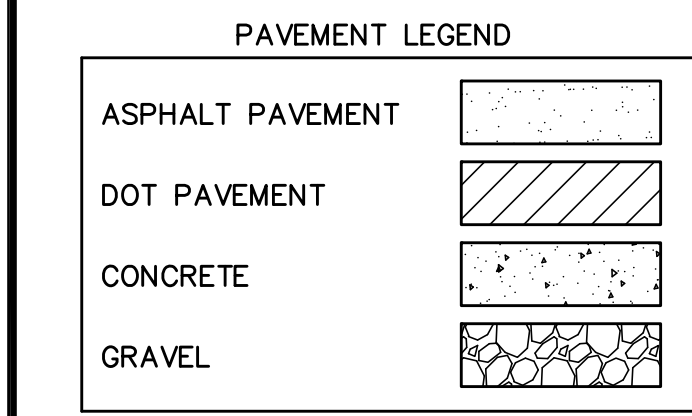
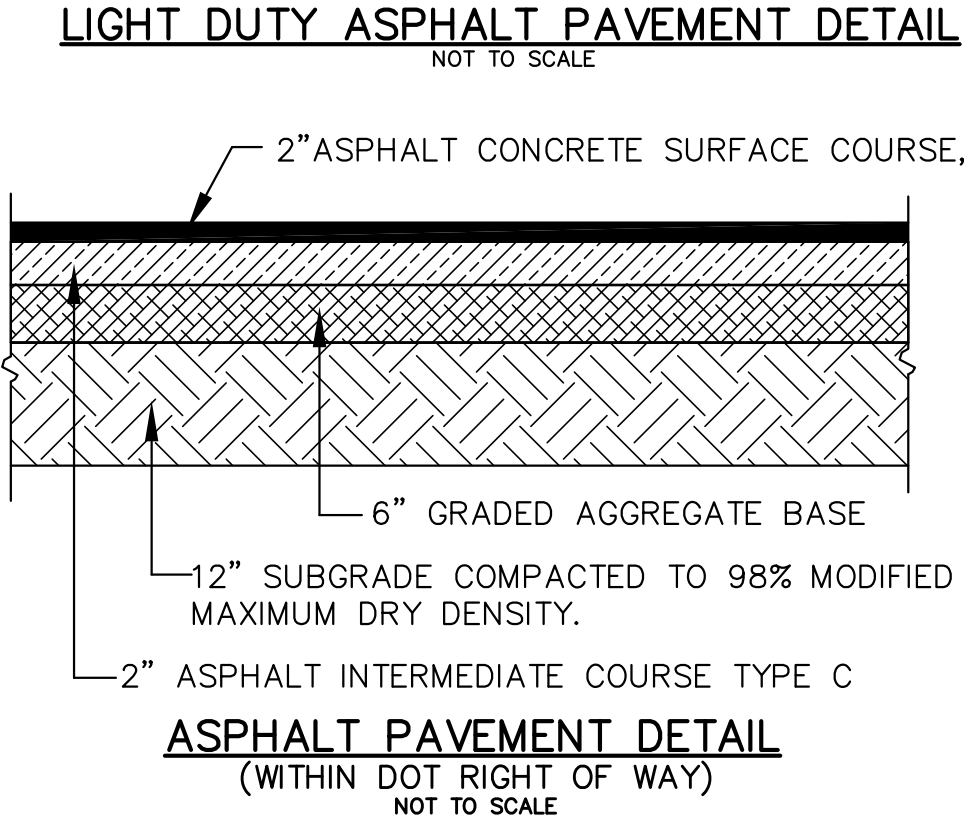
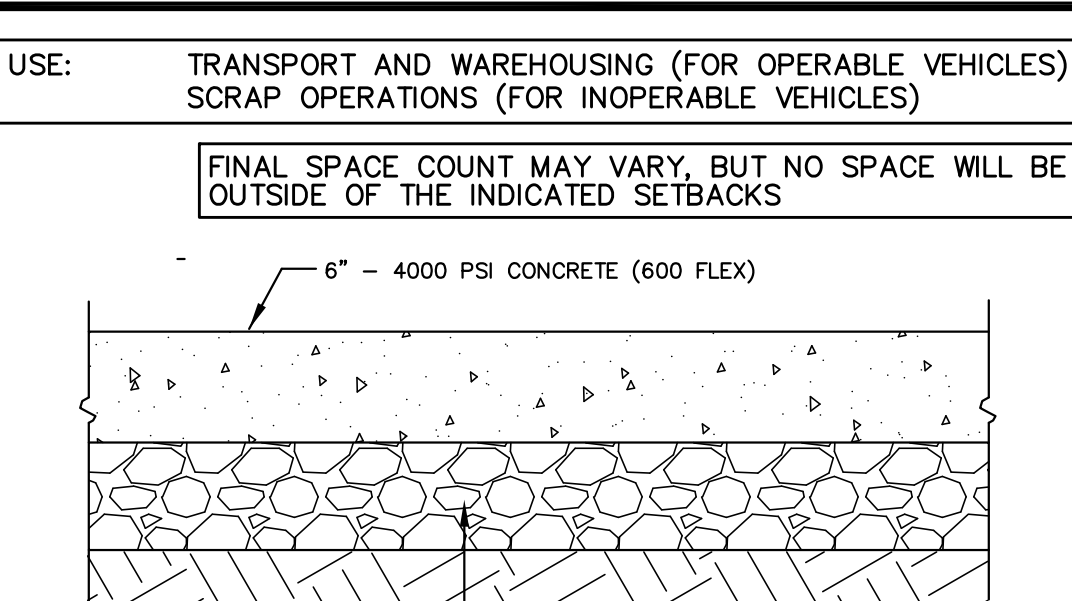
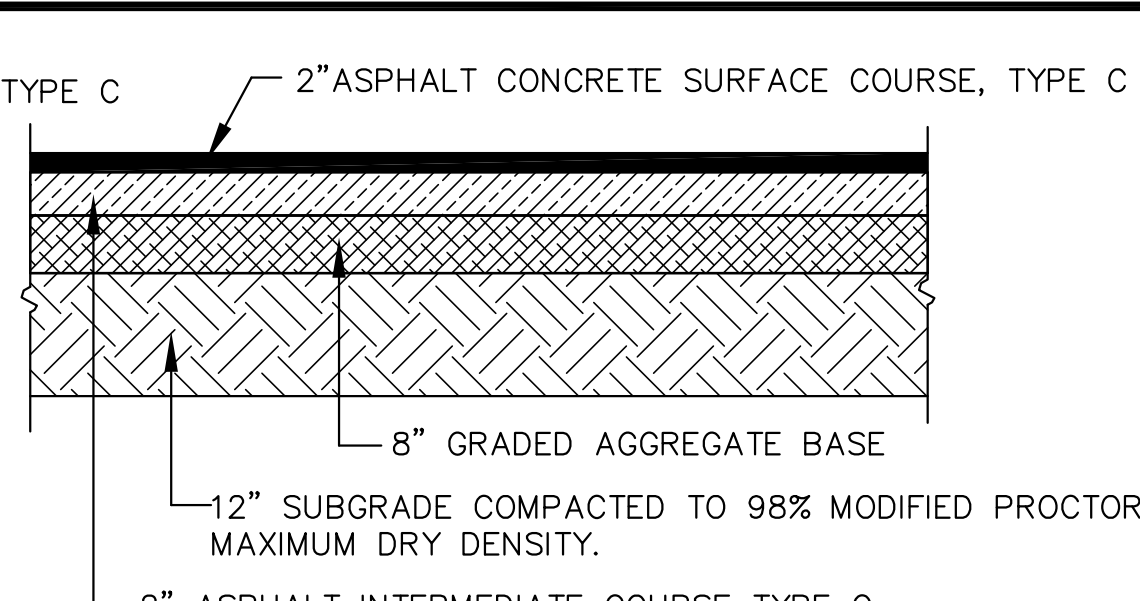
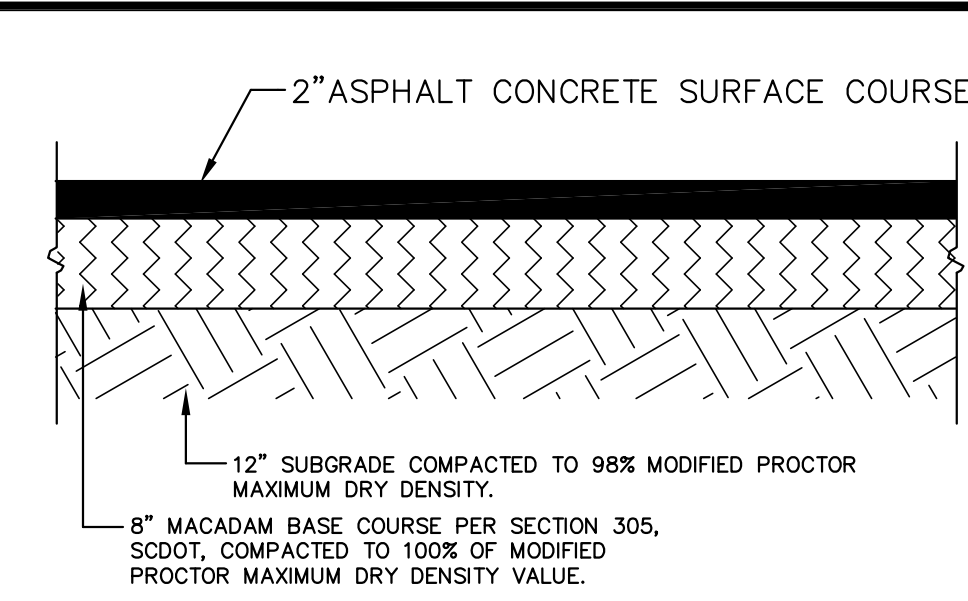
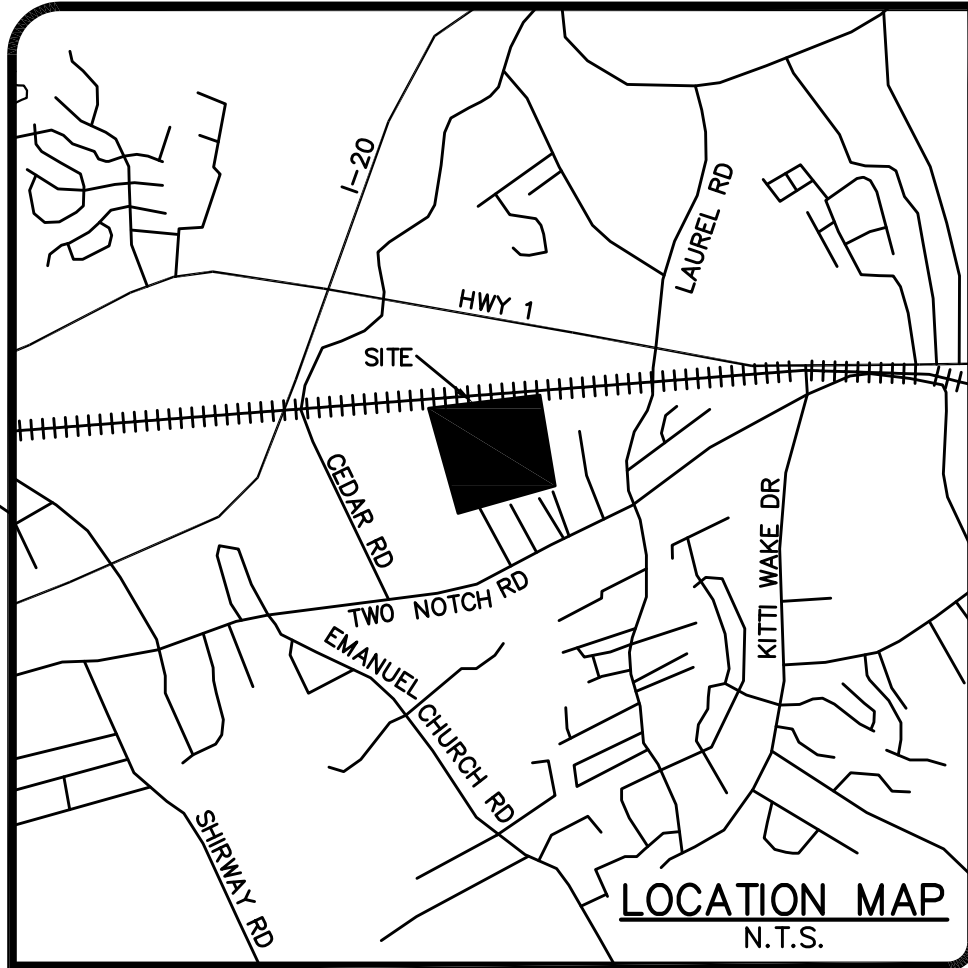


PROJECT DATA / INFORMATION

DATE: 05/13/2020 JOB NO. 2020-09

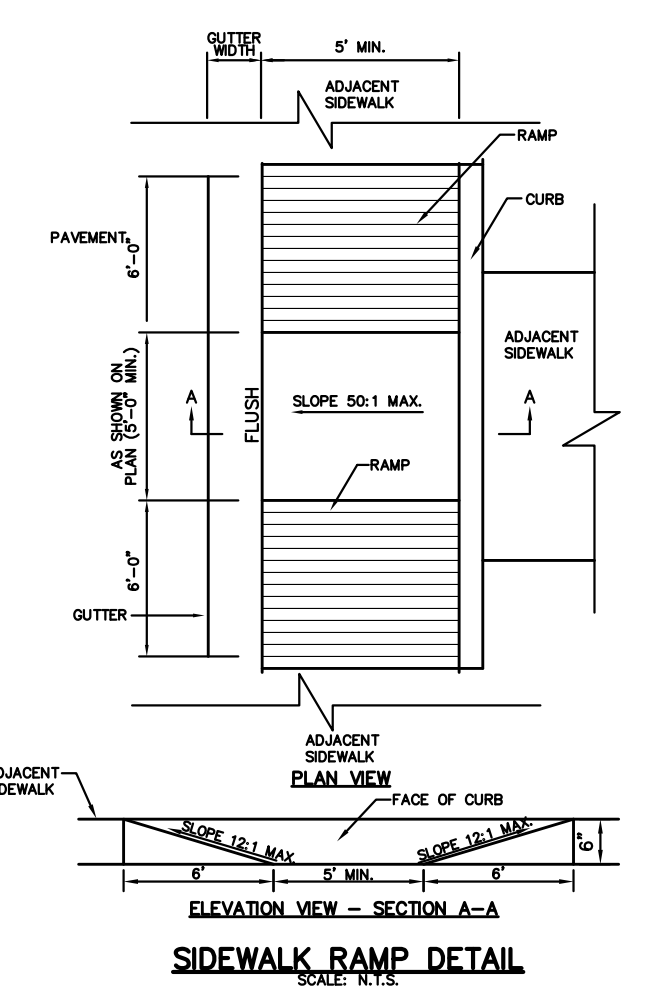
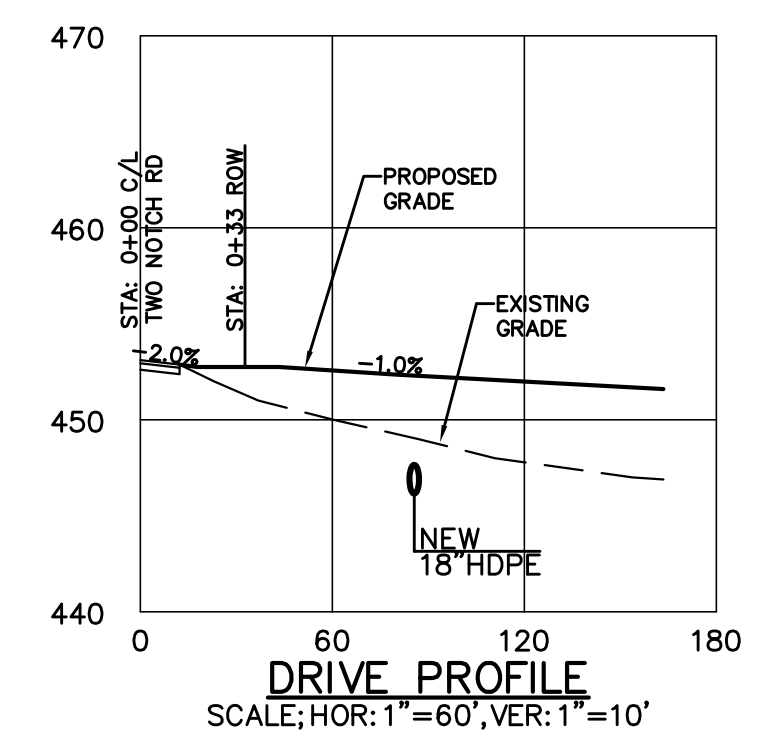
SHEET: COVER

COVER



- SCDOT NOTES:
- CONTRACTOR SHALL BE RESPONSIBLE FOR UTILIZING ALL APPLICABLE AND CURRENT SCDOT STANDARD DRAWINGS INCLUDING, BUT NOT LIMITED TO, THE DRAWINGS INCLUDED WITHIN THESE PLANS AND THE APPROVED PERMIT PACKAGE.
 - CONTRACTOR TO CLEAR EXISTING CULVERTS/PIPES, CATCH BASINS, AND DITCHES ALONG FRONTAGE AND DOWNSTREAM AS NECESSARY TO ACHIEVE POSITIVE DRAINAGE.
 - ALL PAVEMENT MARKINGS IN SCDOT R/W ARE TO BE THERMOPLASTIC (OR EPOXY IF CONCRETE) OR APPROVED EQUIVALENT.
 - CONTRACTOR SHALL ADJUST OR REPLACE ALL EXISTING SIGNAGE AS NECESSARY.

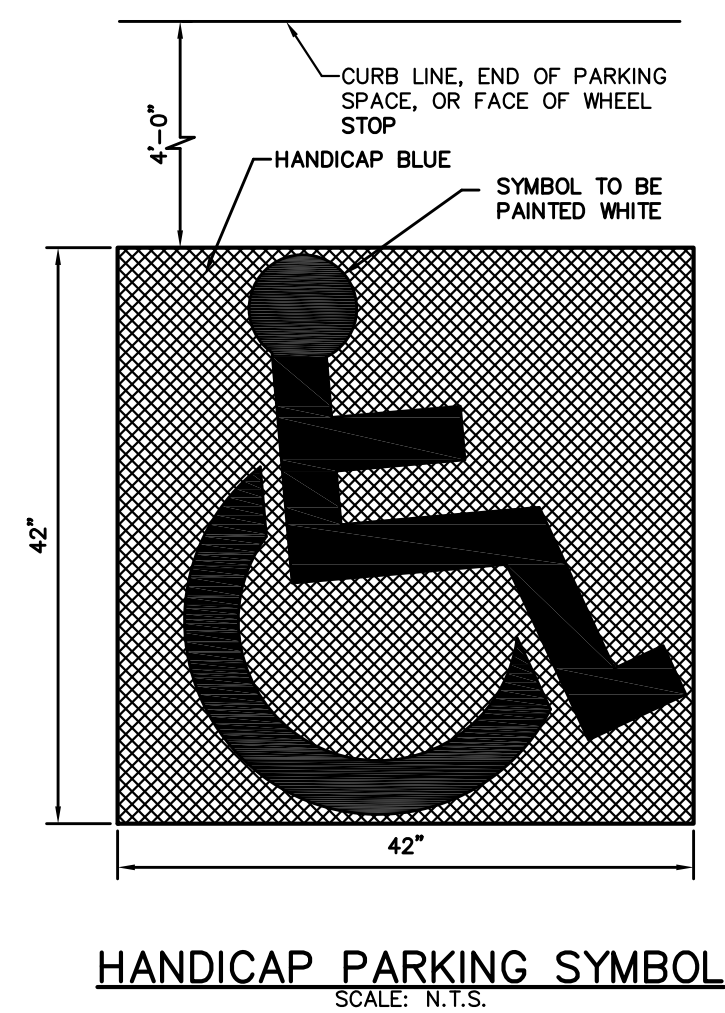
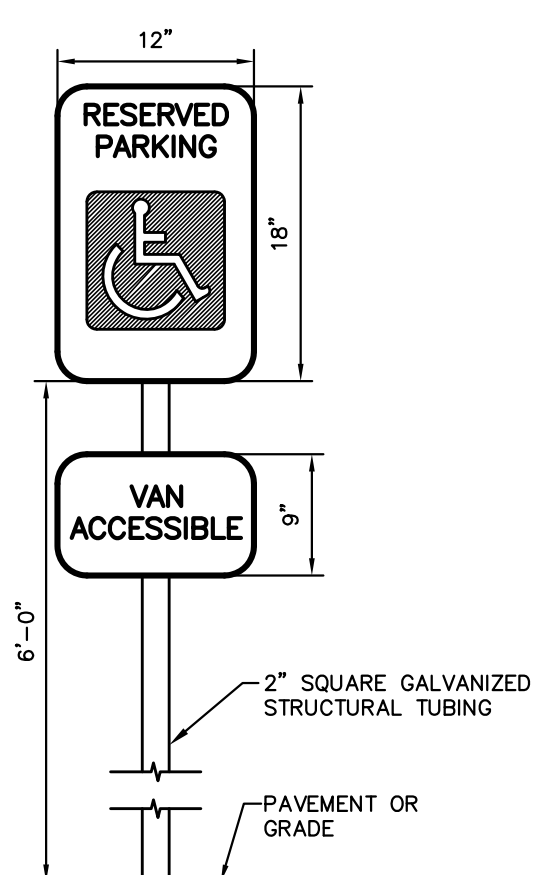
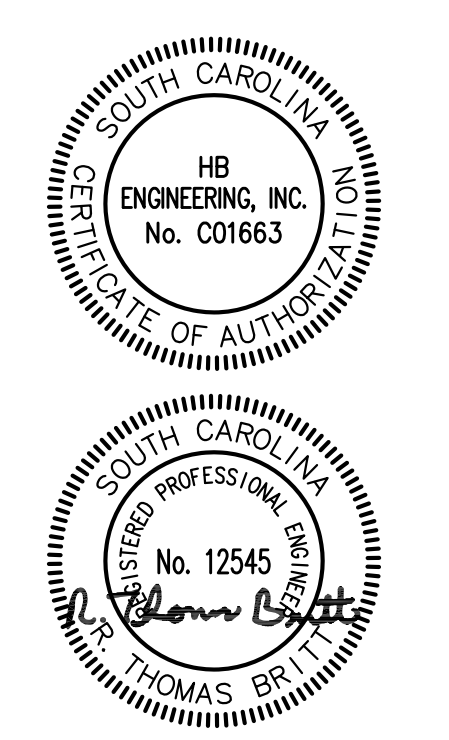
SCDOT DETAILS	REF. #
FLAGGING	610-005-10
SHOULDER CLOSURE	610-205-00



OWNER: BHT PROPERTIES GROUP
5081 SW 48TH ST.
DARLE, FL 33314
CONTACT: RAM ADAR
PH: 954-406-6744
EMAIL: ram@bhtpropertiesgroup.com

TMS#: 005596-02-031, 005596-02-056,
005596-02-005, 005596-02-006,
005596-02-007, 005596-02-008,
& 005596-02-009

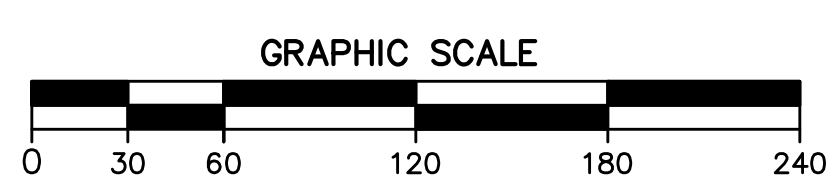
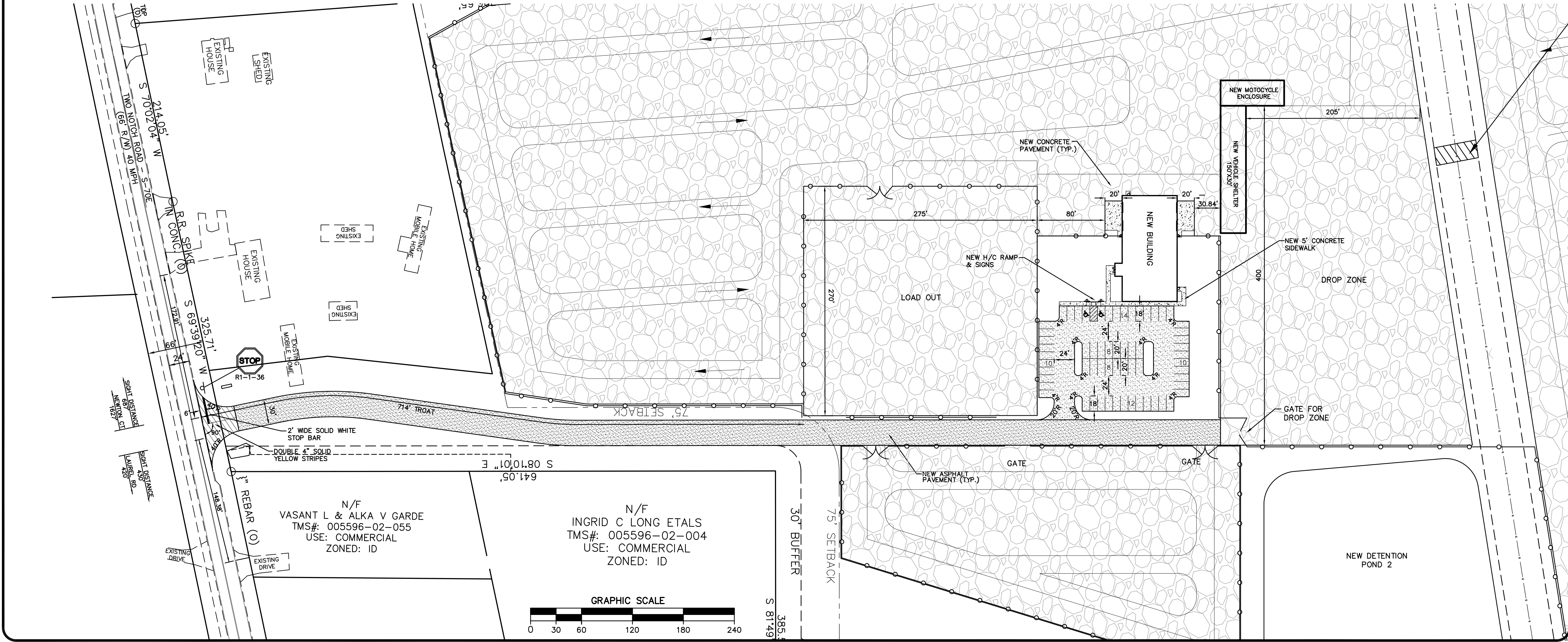
SITE AREA: 106.30 AC.
DISTURBED AREA: 91.1 AC.



NOTE: ALL SIGNS SHALL BE PER A.D.A. CODE OR SCDOT STANDARDS WHICHEVER IS MORE STRINGENT.

RESERVED PARKING FOR HANDICAPPED SIGN
SCALE: N.T.S.

HANDICAP PARKING SYMBOL
SCALE: N.T.S.



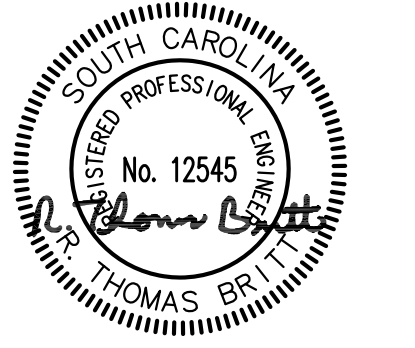
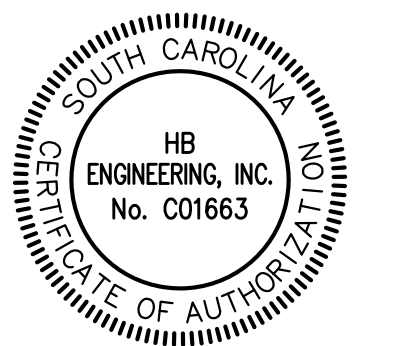
BHT PROPERTIES GROUP
VEHICLE STORAGE AND SALES - PHASE 2
LEXINGTON COUNTY
SOUTH CAROLINA

No.	Date	Revision
1	6/10/20	FRONT SETBACK CHANGE
2	8/11/20	BUILDING UPDATE

Sheet Title: AREA 2 SITE PLAN

Drawn by: TB
Designed by: TB
Checked by: TB
Scale: 1"=120'
Project No. 18136
Date: 4/27/2020

2.1
17



HB Engineering
 SITE DEVELOPMENT CONSULTANTS
 720 OLD CHEROKEE ROAD
 LEXINGTON, SOUTH CAROLINA 29072
 803-957-7027 FAX 877-728-0808

BHT PROPERTIES GROUP
VEHICLE STORAGE AND SALES - PHASE 2
 LEXINGTON COUNTY
 SOUTH CAROLINA

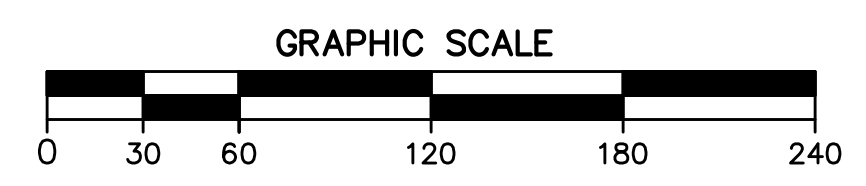
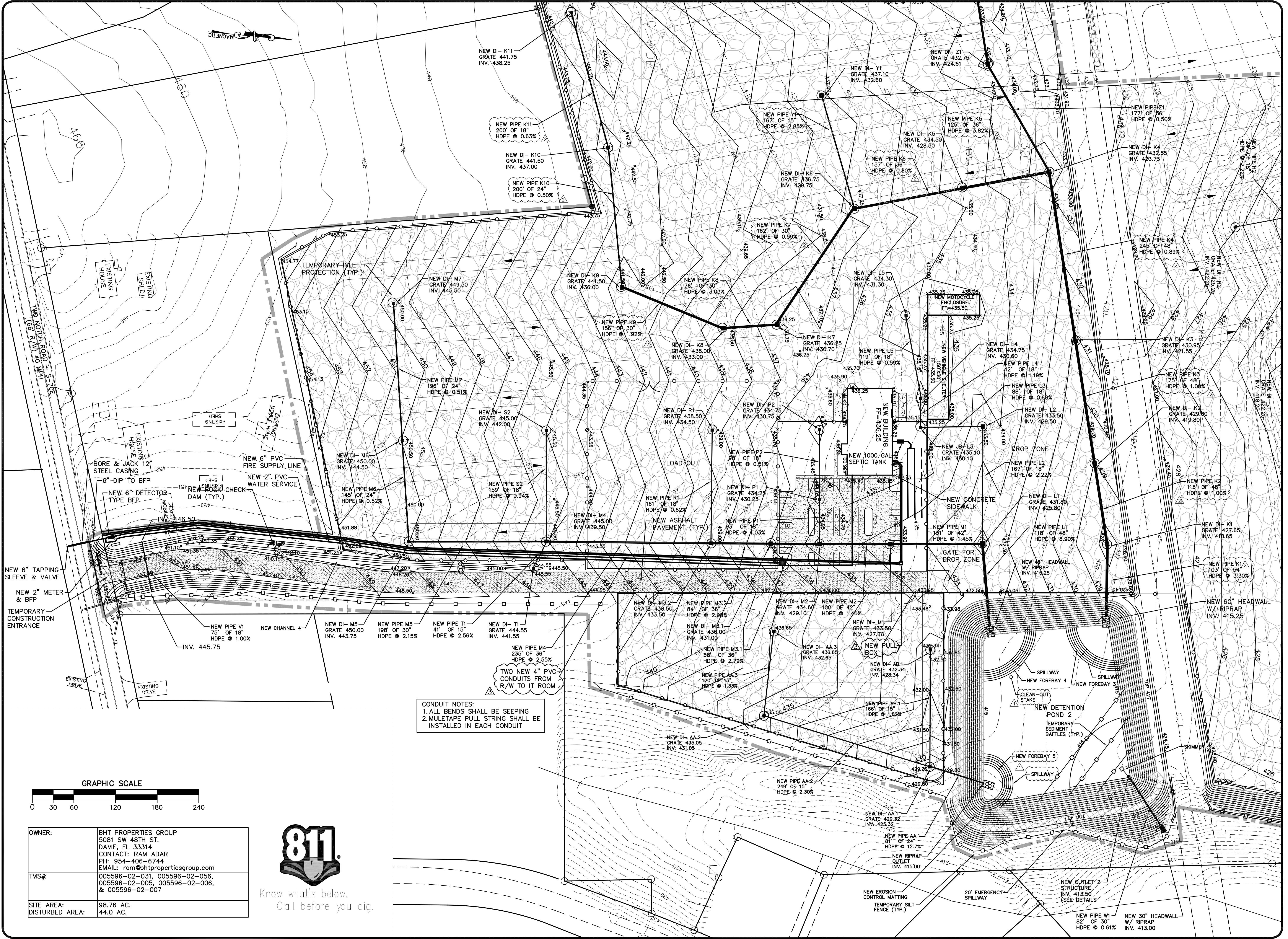
No.	Date	Revision
1	6/10/20	COUNTY COMMENTS 5-8-2020
2	8/11/20	PIPE RESIZING
3	8/11/20	Add Conduits

Sheet Title:
FINAL GRADING, DRAINAGE & EROSION CONTROL PLAN - AREA 2

Drawn by:	TB
Designed by:	TB
Checked by:	TB
Scale:	1"=120'
Project No.:	18136
Date:	4/27/2020

2.6

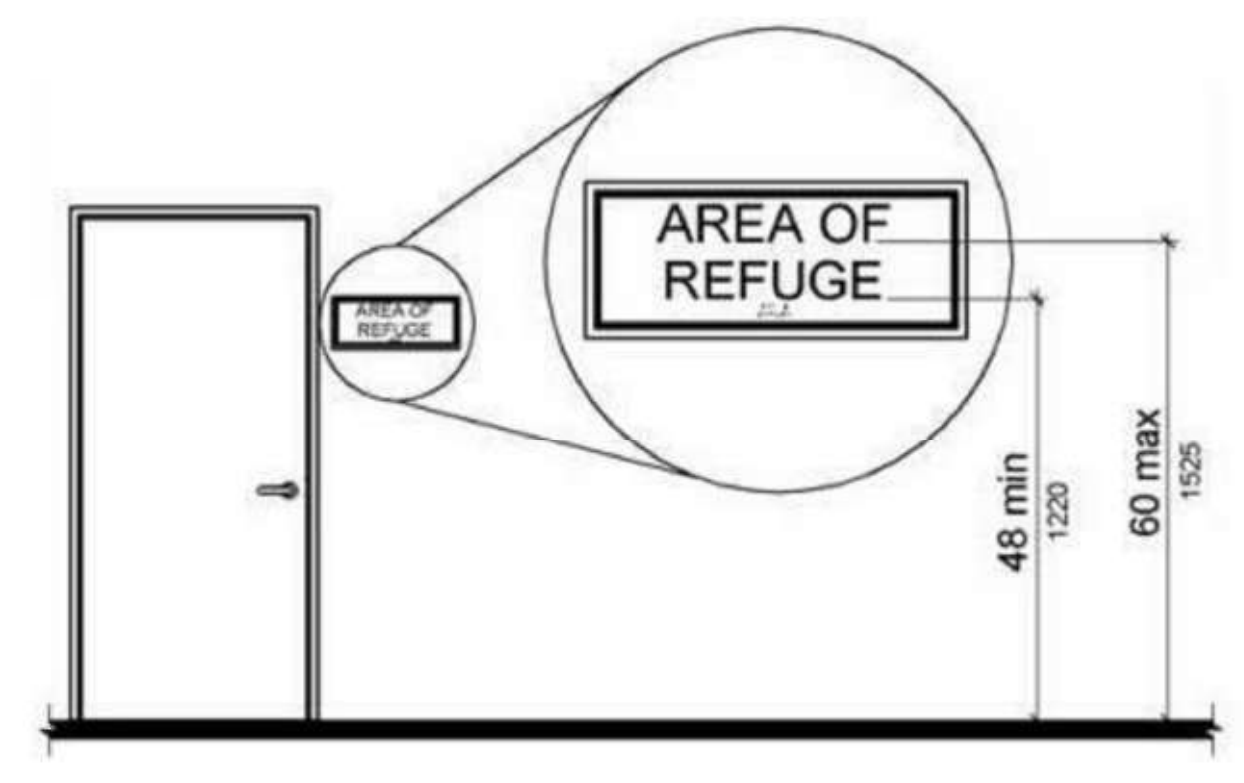
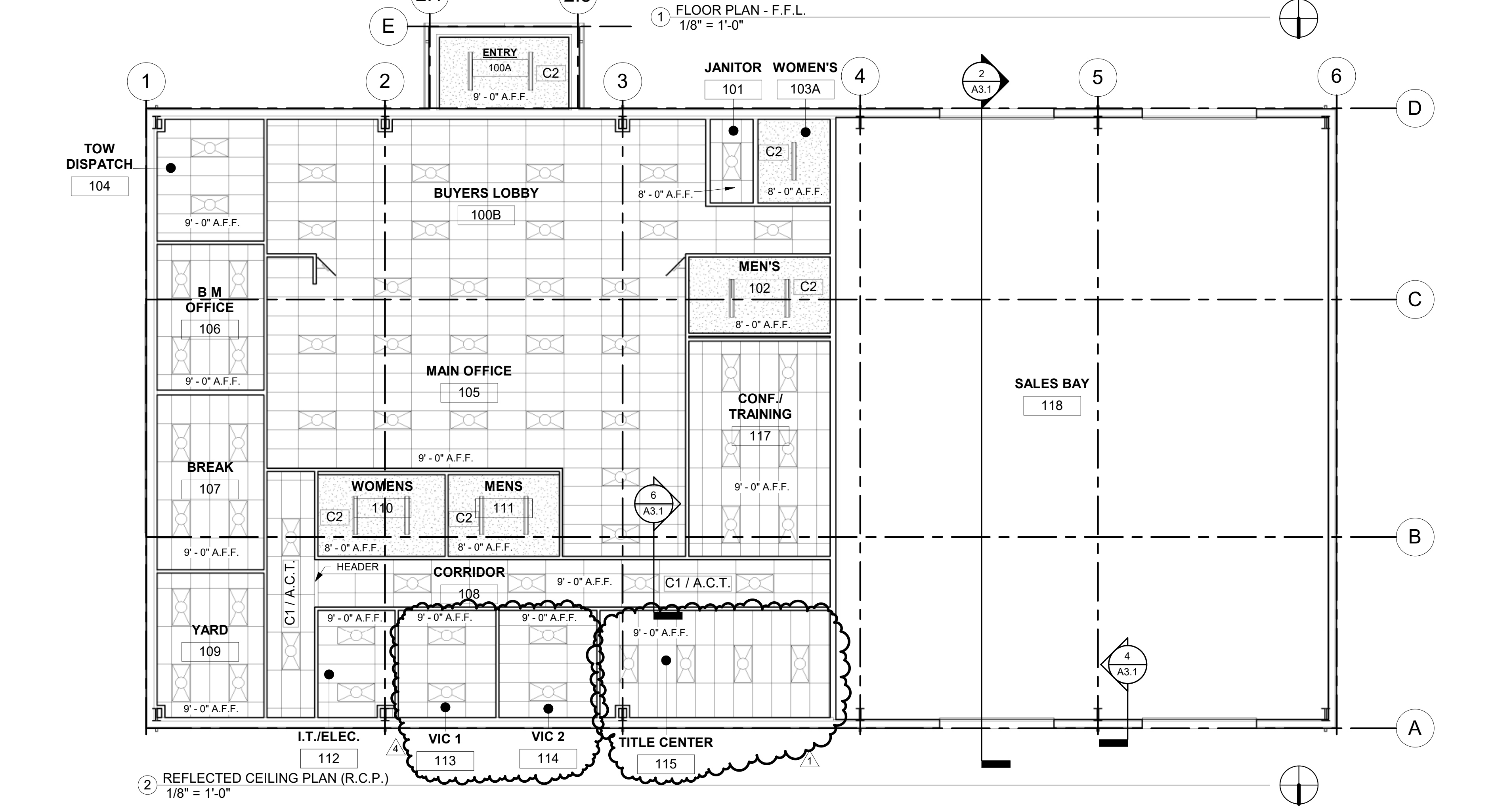
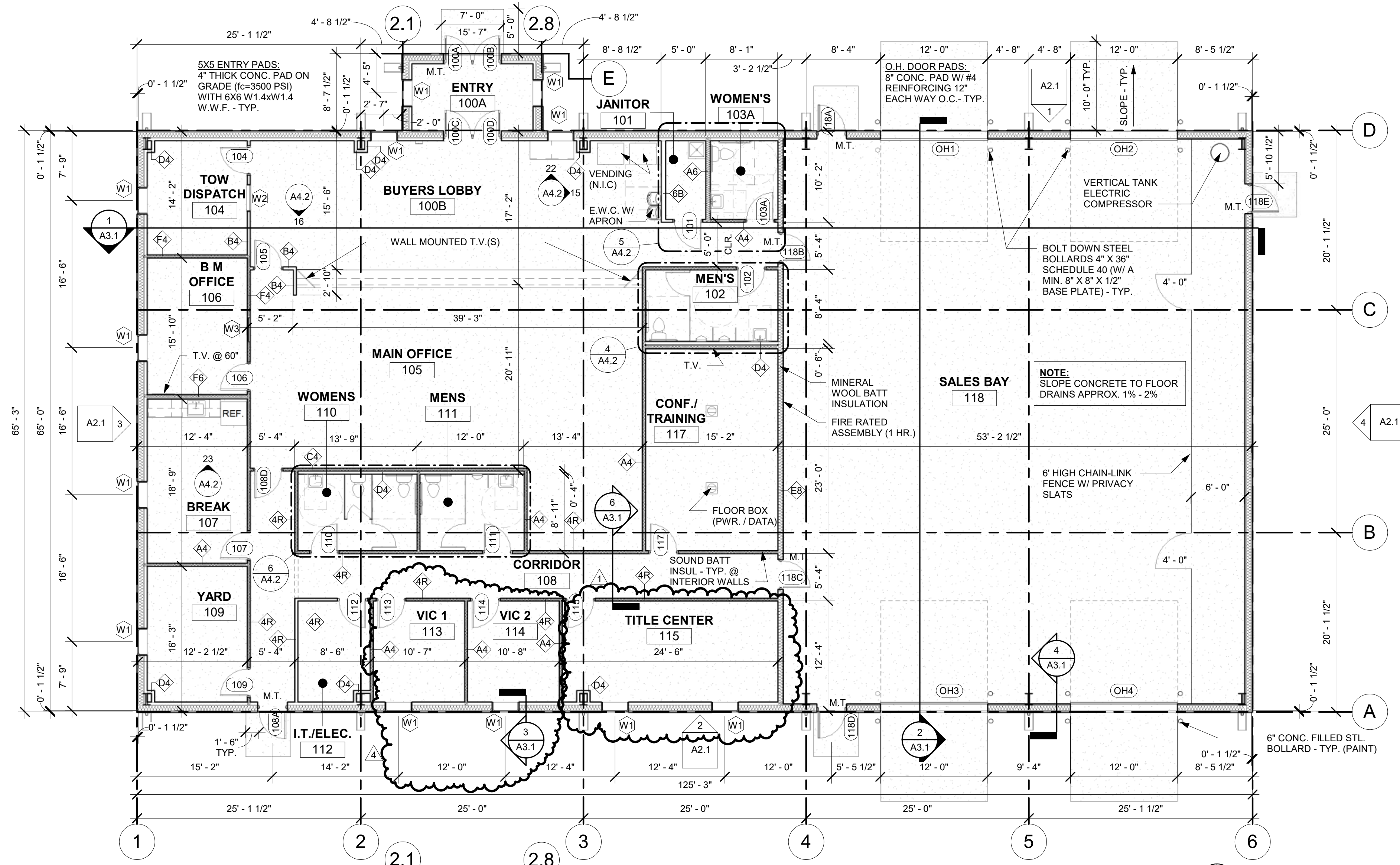
of 17



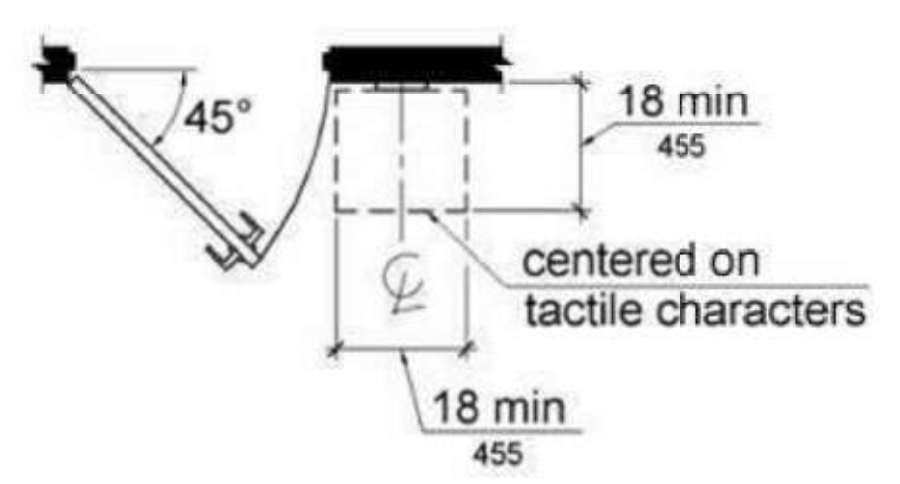
OWNER:	BHT PROPERTIES GROUP 5081 SW 48TH ST. DAVE, FL 33314 CONTACT: RAM ADAR PH: 954-406-6744 EMAIL: ram@bhtpropertiesgroup.com
TMS#:	005596-02-031, 005596-02-056, 005596-02-005, 005596-02-006, & 005596-02-007
SITE AREA:	98.76 AC.
DISTURBED AREA:	44.0 AC.



Know what's below.
 Call before you dig.



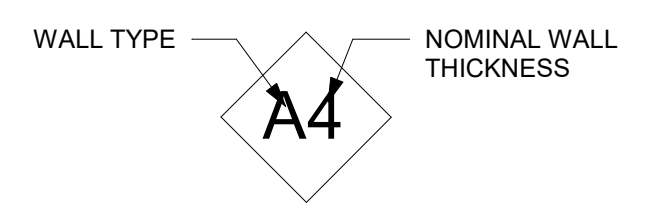
3 TACTILE CHARACTER HEIGHT
12" = 1'-0"



4 TACTILE SIGN LOCATION
12" = 1'-0"



5 EXIT SIGN WITH BRAILLE
12" = 1'-0"



CEILING LEGEND	
	2' x 4' ACOUSTICAL CEILING GRID AND TILE
	GYP. BOARD ON METAL FRAMING

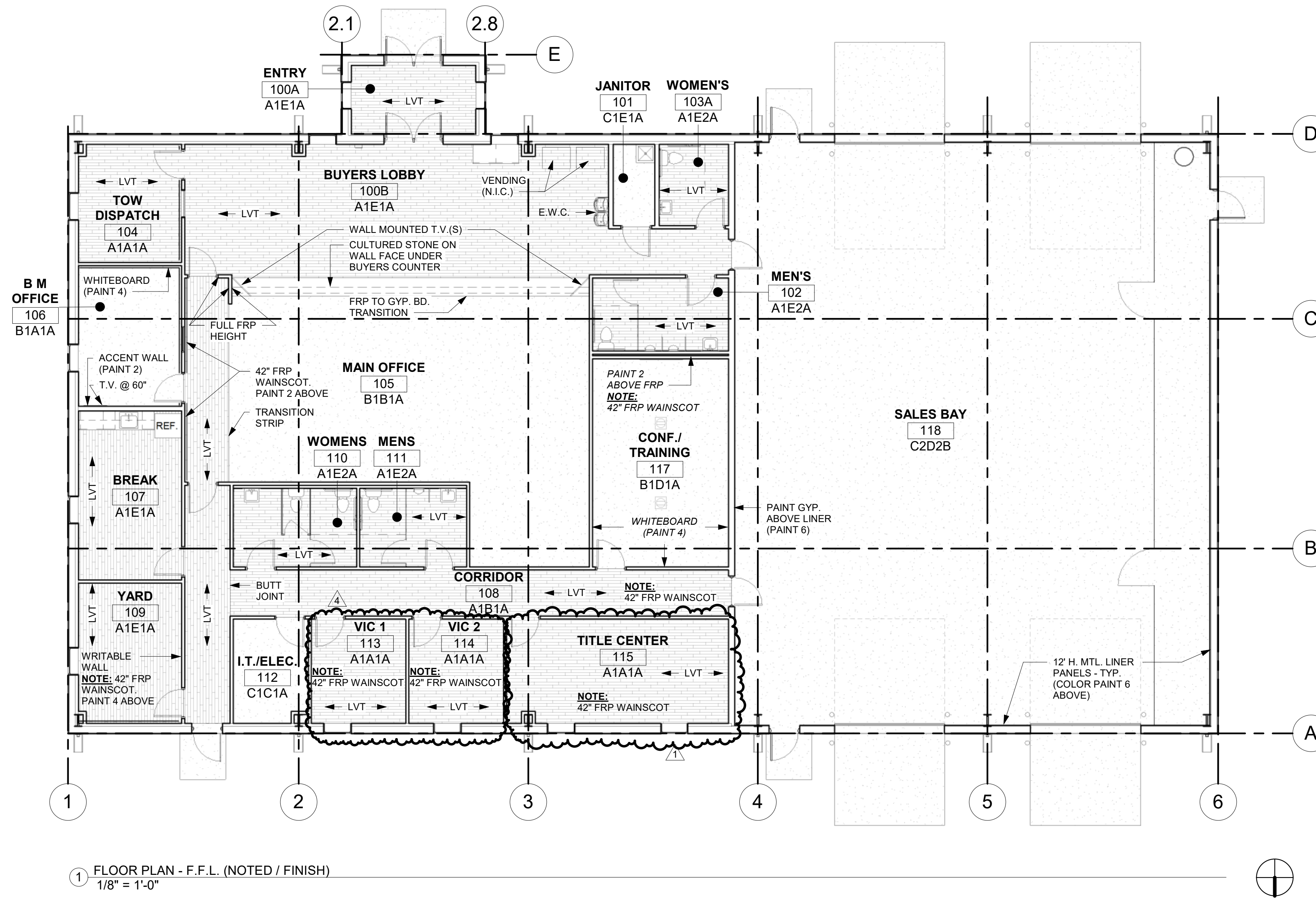
#	DATE	COMMENTS
1	08/11/20	CIVIL & PLAN MODIFICATIONS
4	02/05/21	PLAN MODIFICATIONS

Insurance Auto Auction, Inc.
430 Two Notch Rd.
Lexington, South Carolina 29073
PERMIT - CONSTRUCTION DOCUMENTS

02/05/21
STATE OF SOUTH CAROLINA
KEVIN KAUSCH
REGISTERED ARCHITECT
No. 10444

FLOOR PLAN & REFLECTED CEILING PLAN
DATE: 05/13/2020 JOB NO. 2020-09
SHEET: **A1.0**

STATE OF SOUTH CAROLINA
THE HILL FIRM
INC.
Fort Smith, AR
No. 101657
REGISTERED ARCHITECTS



FLOOR FINISH		WALL FINISH		CEILING FINISH		LAMINATE FINISH																
CARPET 1: MNFR: Shaw STYLE: Space STYLE #: 50911 COLOR: Stealing Beauty COLOR #: 11500	PAINT 1: (interior walls - Light Gray) MNFR: S/B Sherwin Williams STYLE: Satin COLOR: Site White COLOR #: SW 7070	LAY-IN: MNFR: Armstrong STYLE: 24 in. x 48 in. STYLE: Optima Lay-in & Tegular STYLE #: 3151 COLOR: White	PAINT 2: (interior walls - Gray) MNFR: S/B Sherwin Williams STYLE: Satin COLOR: Software COLOR #: SW 7074	GYPSUM BOARD: (Paint) MNFR: American Gypsum or Equal TYPE: USG 5/8" Tapered Edge COLOR: Match Adjacent Walls	LAMINATE: (millwork) MNFR: Wilsonart International STYLE: Standard Laminate PATTERN #: 4622-60 COLOR: Grey Nebula	LVT: MNFR: Armstrong TYPE: Vivero Best - Kingsville Oak COLOR: Gate House Gray COLOR #: U1081	PAINT 3: (interior walls - White) MNFR: S/B Sherwin Williams STYLE: Satin COLOR: Extra White COLOR #: SW 7006	FRP FINISH FIBER REINFORCED PLASTIC (FRP): MNFR: Marlite STYLE: Standard COLOR #: P 100 White TEXTURE: Pebbled	LAMINATE: (ADA Flip up countertop) MNFR: Wilsonart International STYLE: Standard Laminate PATTERN #: 4623-60 COLOR: Graphite Nebula	S. CONC.: (sealed concrete) MNFR: CONCRETE SEALERS USA TYPE: SILICONATE MULTI-SURFACE ITEM# PS1015G	PAINT 4: (Dry Erase Paint) MNFR: Sherwin Williams COLOR: Clear Gloss Coating COLOR #: KB65C200 Kit	BASE FINISH VINYL: MNFR: Roppe STYLE: Vinyl Base SIZE: 4 inch COLOR: Black COLOR #: 100	STONE VENEER SYNTHETIC STONE: (buyer counter front) MNFR: Tritan BP STYLE: Lighting Ridge Panel COLOR #: Gray Fox - LR-4824-GFX	NOTE: PER APPROVED SUBMITTAL	PAINT 5: (door frames) MNFR: Sherwin Williams STYLE: Semi gloss COLOR: Black COLOR #: SW6993	QUARTZ QUARTZ COUNTERTOP: MNFR: Wilsonart STYLE: Vesuvius COLOR #: Q1017 EDGE PROFILE: 1/4 Round	DOORS INTERIOR: (coordinate w/ schedule) MNFR: Marshfield / Masonite TYPE: Flush Solid Core Red Oak FINISH: Natural/Clear	PAINT 6: (exterior wall) MNFR: Sherwin Williams COLOR: Extra White COLOR #: SW7006	QUARTZ FREESTANDING OPEN METAL SHELVING: MNFR: Grainger BRAND: Edsal STYLE: Freestanding Open Metal Shelving (5 Shelves) SIZE: 36"W x 18"D x 72" H COLOR: Gray	EXTERIOR: (see schedule)	PAINT 7: (exterior accent / band at top of building) MNFR: Sherwin Williams COLOR: Safety Red COLOR #: SW4081	NOTE: Requires Paint 3 - SW 7006 Base Coat

FINISH SCHEDULE				
FLOOR	BASE	WALLS	CEILING	CEILING HEIGHT
A LVT	1 VINYL (4")	A GYP. BOARD (PAINT 1)	1 A.C.T.	A SEE R.C.P.
B CARPET / CPT-1	2 NONE	B GYP. BOARD (PAINT 2)	2 GYP. BOARD (PAINT 3)	B NONE
C SEALED CONCRETE		C GYP. BOARD (PAINT 3)	3 NONE	
D NOT USED		D GYP. BOARD (PAINT 4)		
E NONE		E FRP (FULL HEIGHT)		
		F METAL WALL PANEL		

SEE PLAN FOR ACCENT WALL LOCATIONS AND SPECIFIC FINISH NOTES

THE HILL FIRM
ARCHITECTS
6003 OLD GREENWOOD RD. SUITE D - FT. SMITH, AR 72603
PH: 479.494.1808 - WWW.HILLFIRM.NET

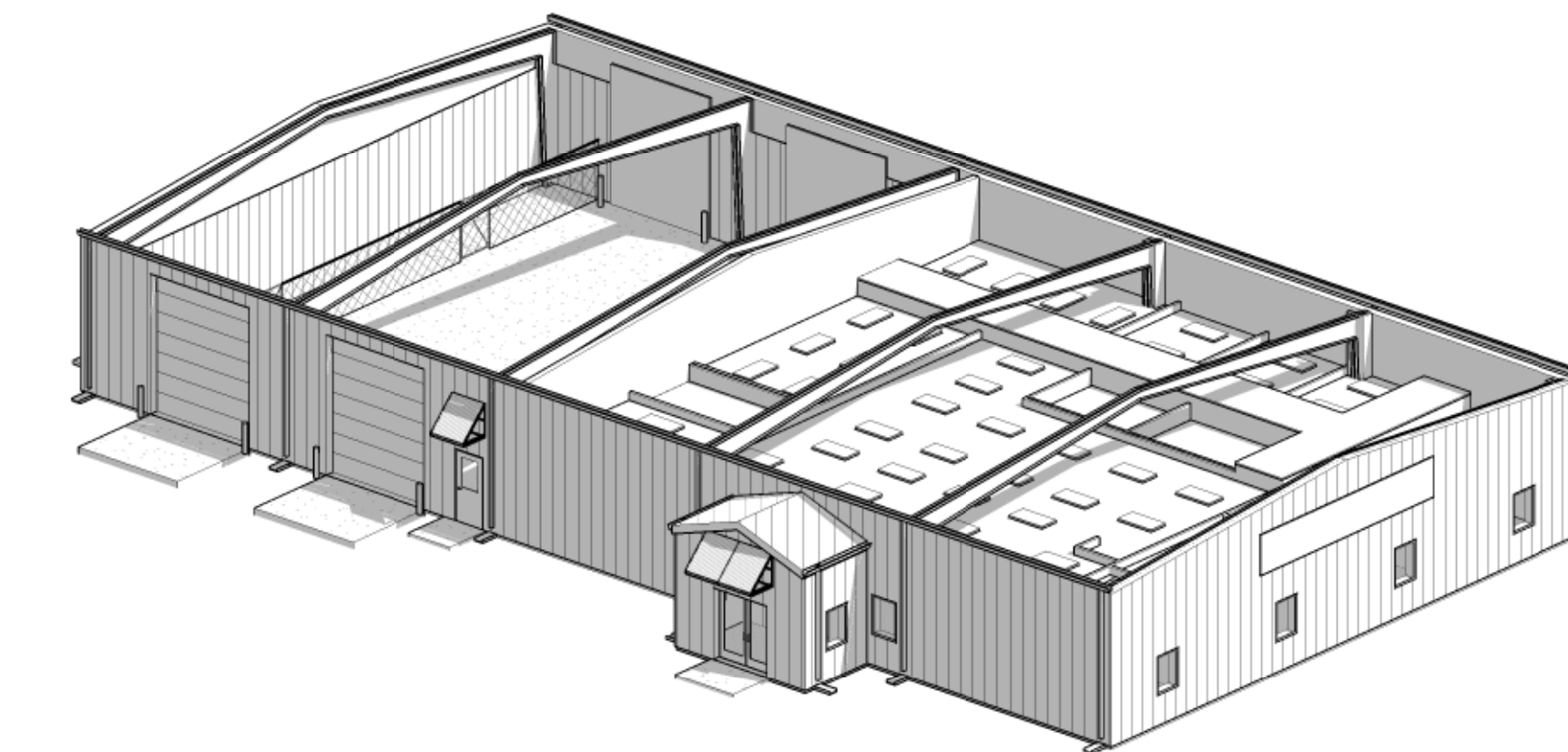
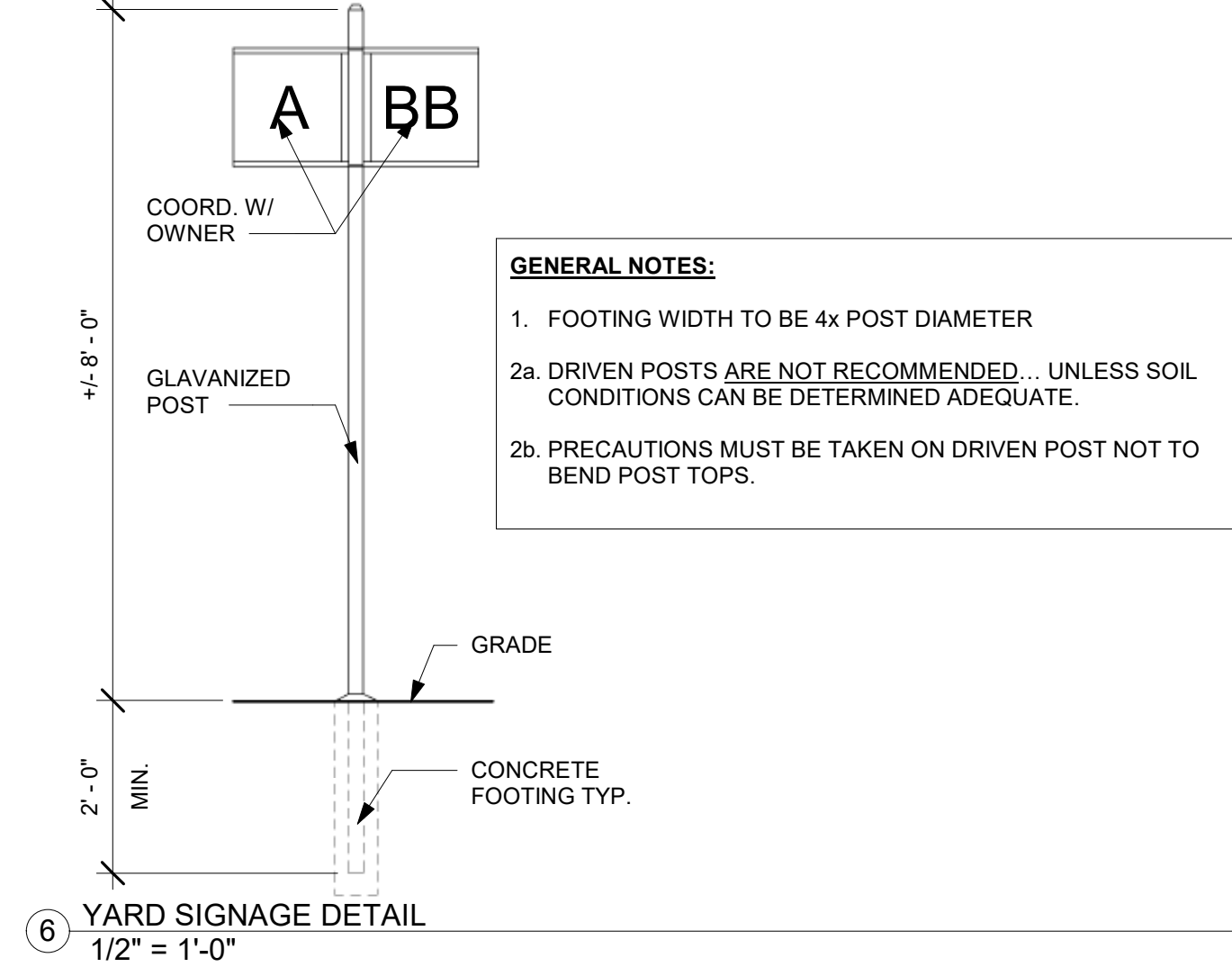
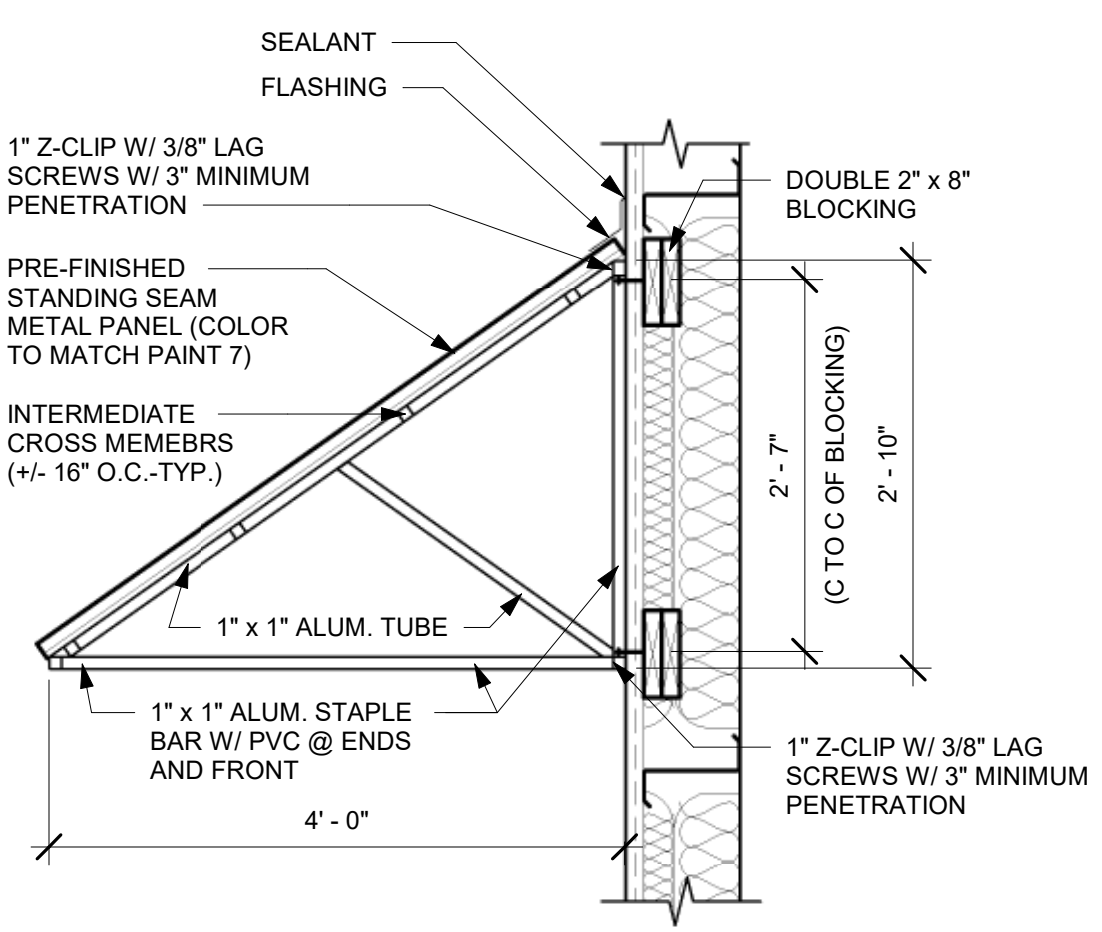
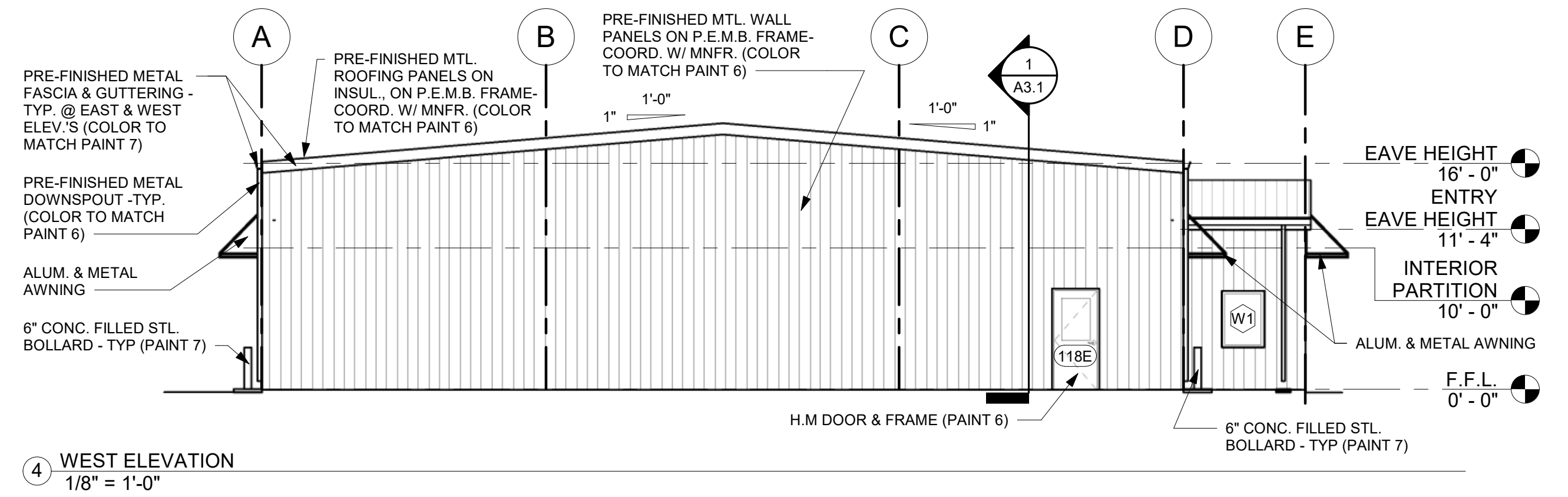
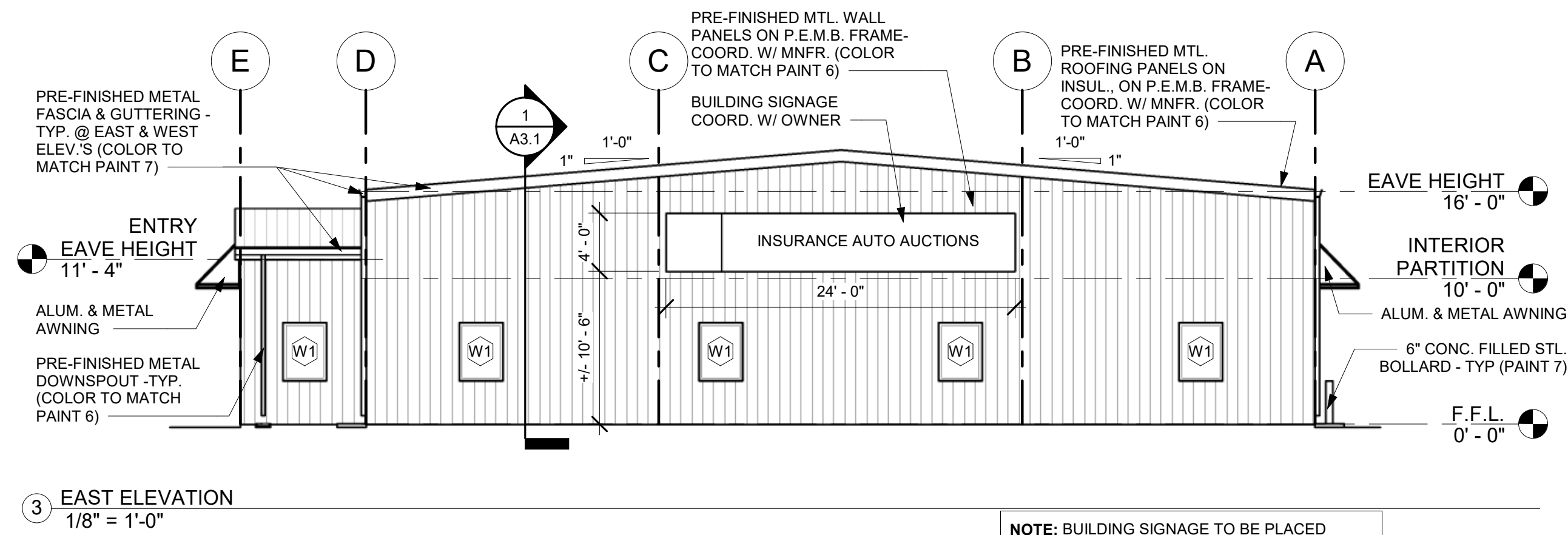
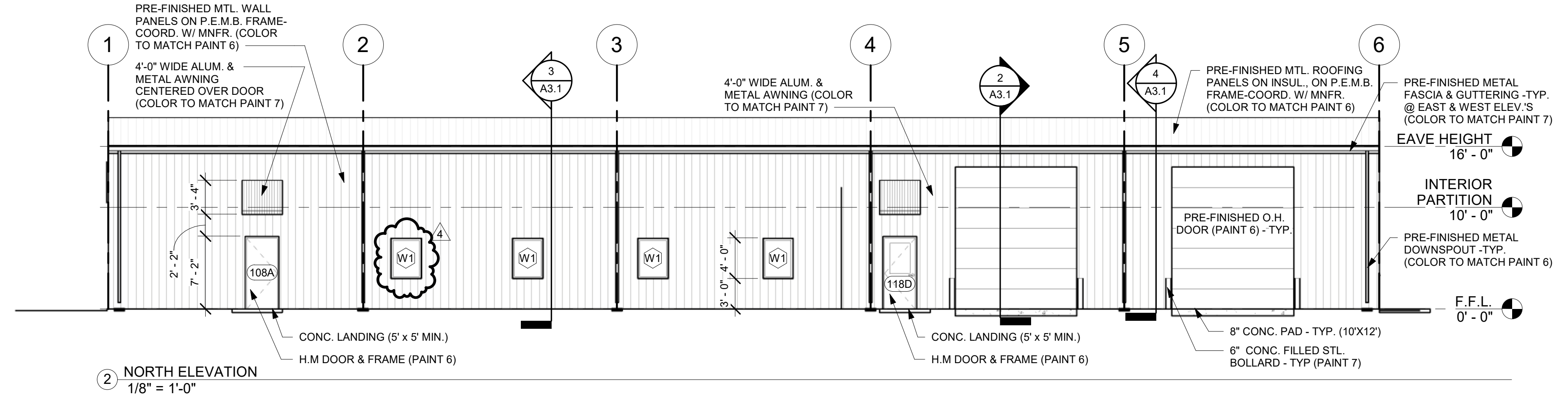
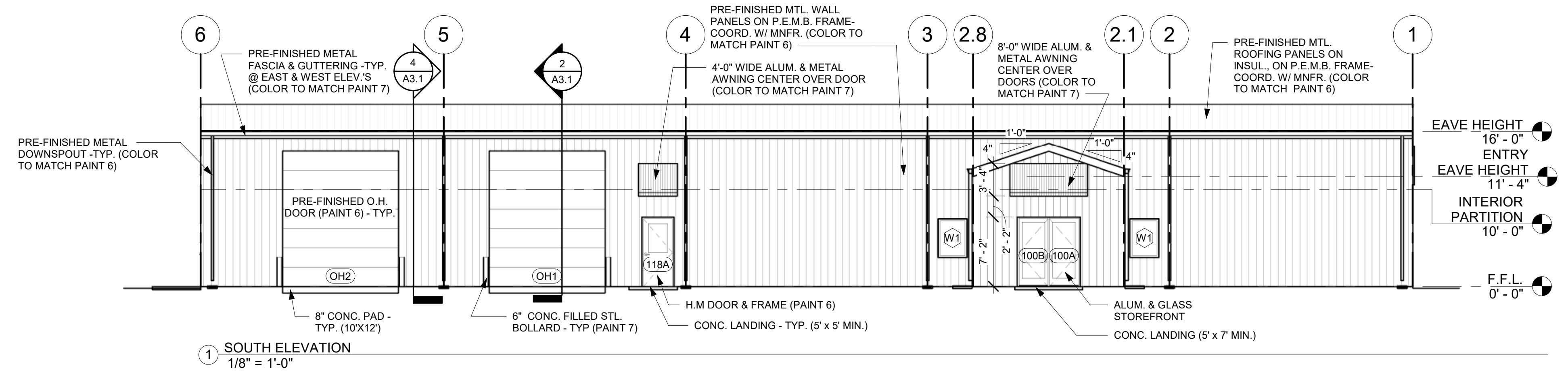
Insurance Auto Auction, Inc.
430 Two Notch Rd.
Lexington, South Carolina 29073

PERMIT - CONSTRUCTION DOCUMENTS

#	DATE	COMMENTS
1	08/11/20	CIVIL & PLAN MODIFICATIONS
4	02/05/21	PLAN MODIFICATIONS

NOTED / FINISH FLOOR PLAN

DATE: 05/13/2020	JOB NO: 2020-09
SHEET: A1.1	



#	DATE	COMMENTS
4	02/05/21	PLAN MODIFICATIONS

Insurance Auto Auction, Inc.
430 Two Notch Rd.
Lexington, South Carolina 29073

PERMIT - CONSTRUCTION DOCUMENTS

02/05/21

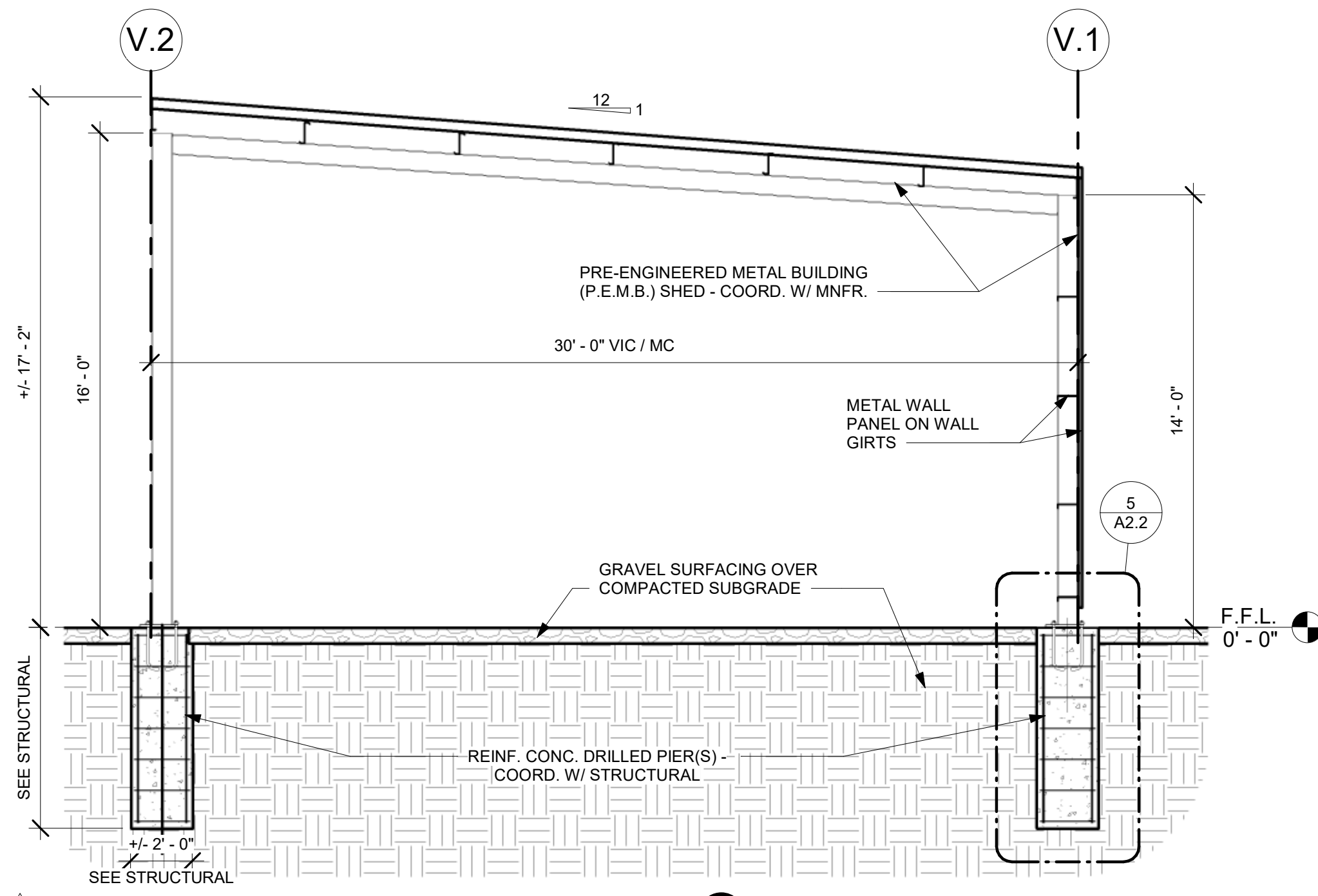
STATE OF SOUTH CAROLINA
KEVIN KAUSCH
Fort Smith, AR
No. 10444
REGISTERED ARCHITECT

EXTERIOR ELEVATIONS & DETAILS

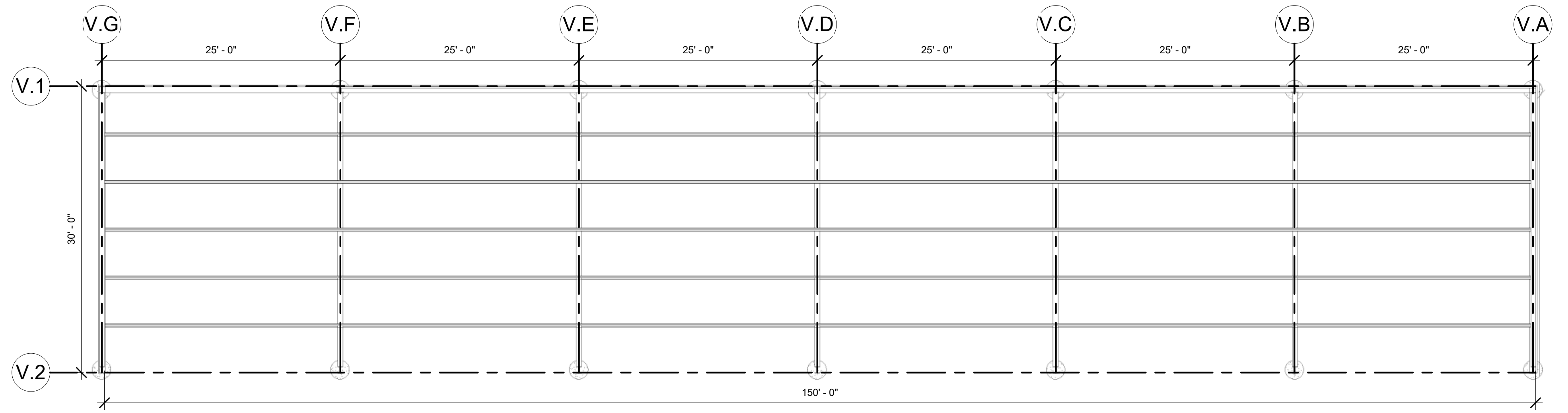
DATE: 05/13/2020 JOB NO. 2020-09

SHEET: **A2.1**

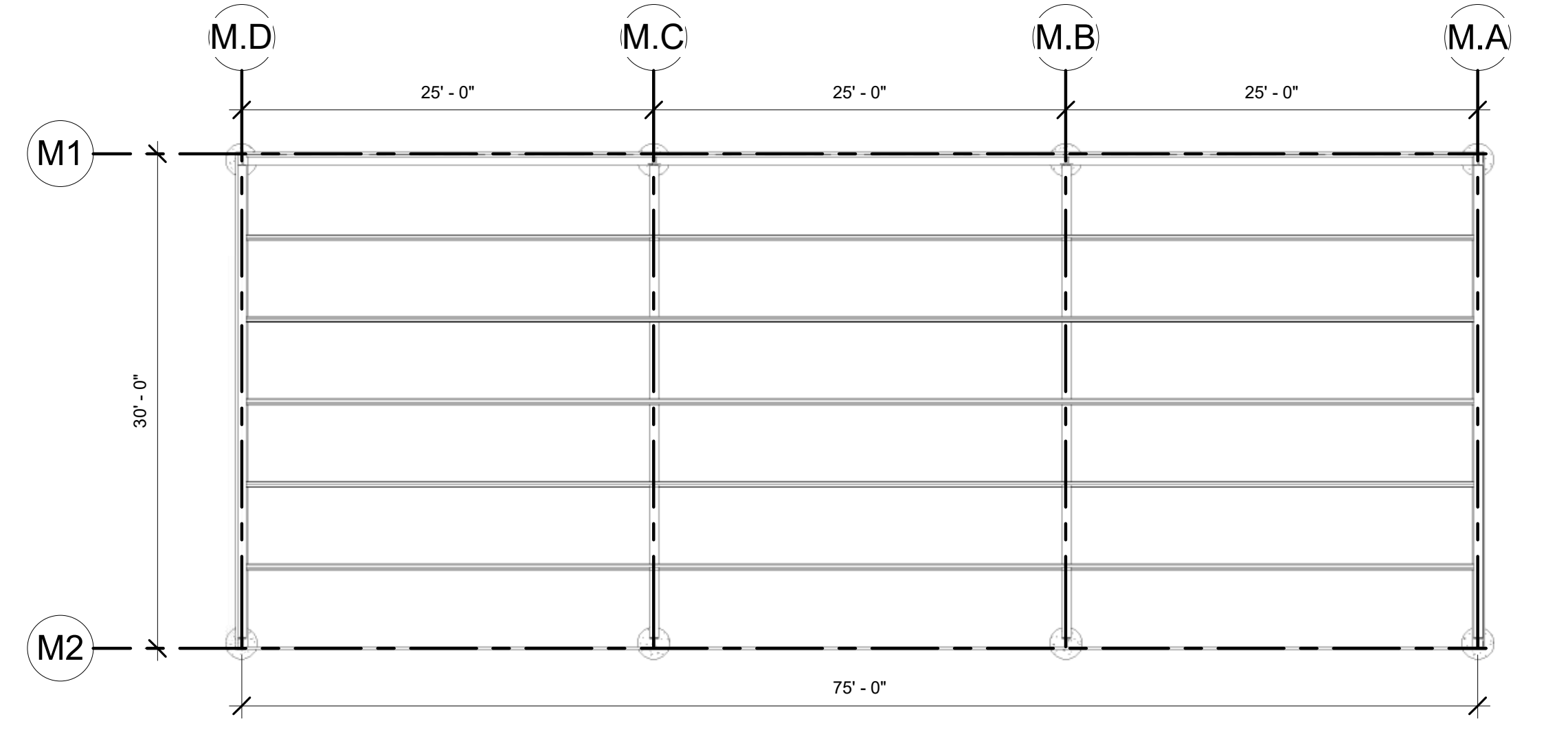
STATE OF SOUTH CAROLINA
THE HILL FIRM
INC.
Fort Smith, AR
No. 101657
REGISTERED ARCHITECTS



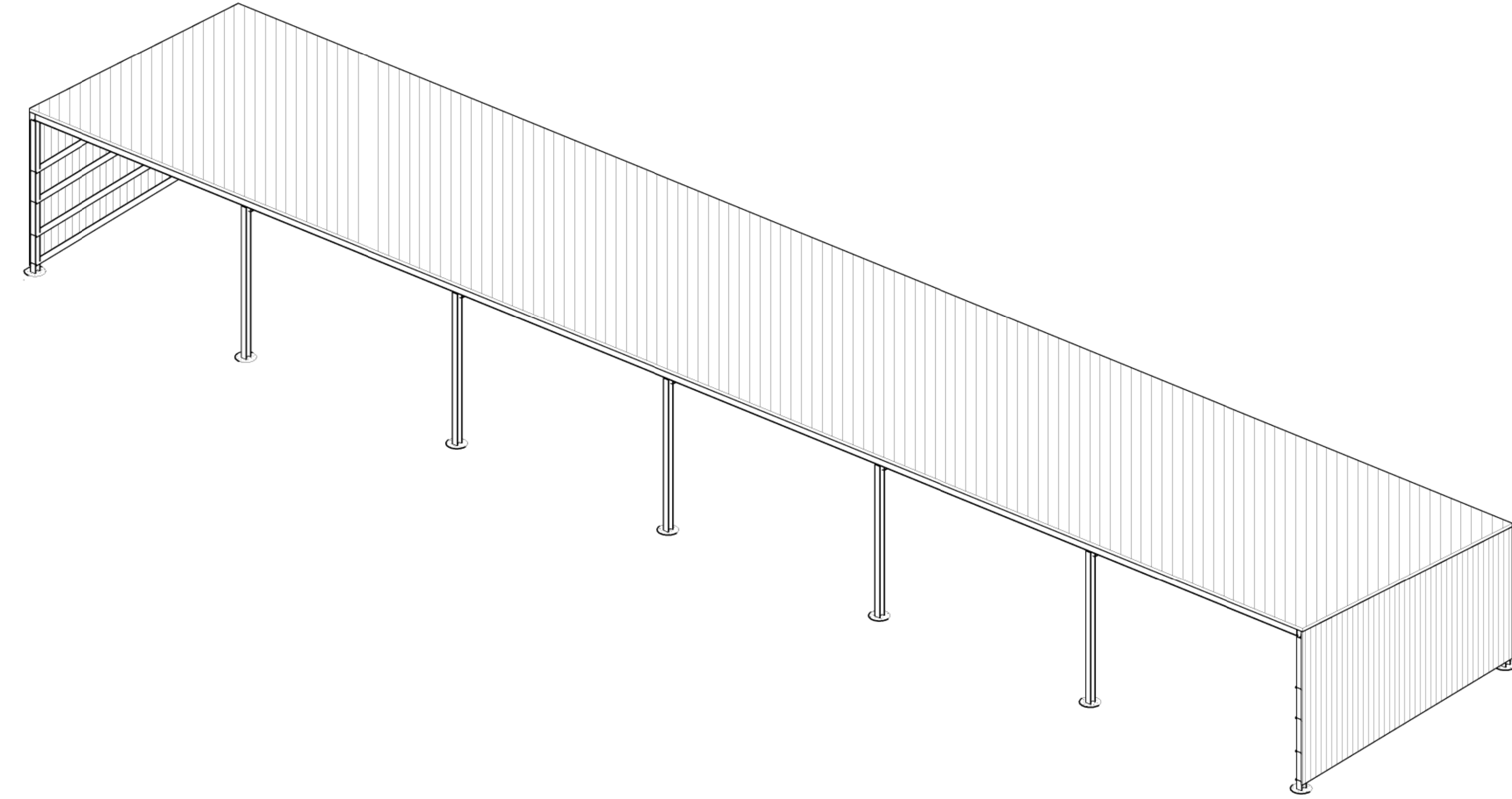
3 VIC / MC SECTION
1/4" = 1'-0"
NOTE: ADDITIONAL DIMENSION ADDED FOR CLARIFICATION



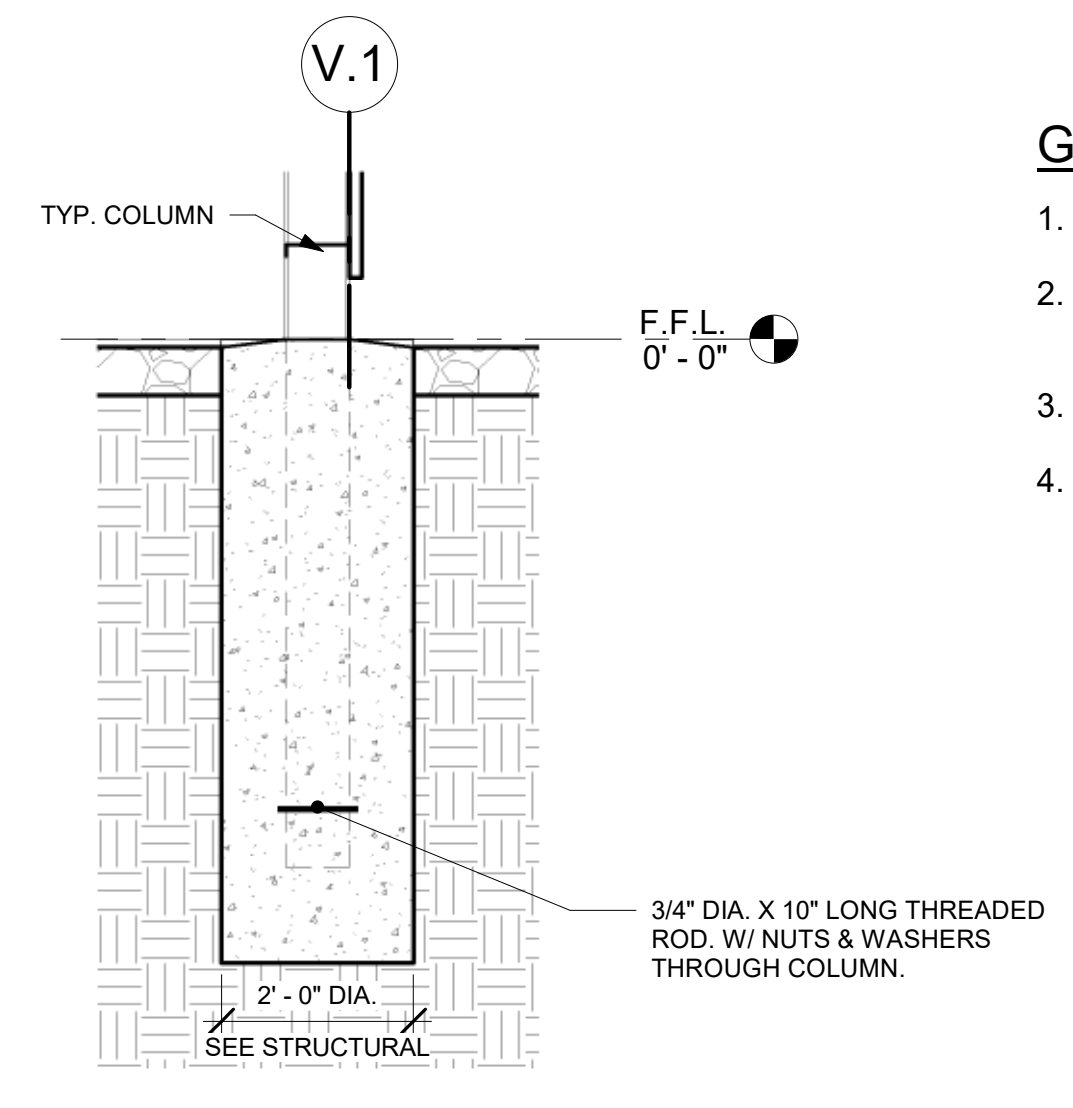
1 VIC SHED - ROOF PLAN
1/8" = 1'-0"



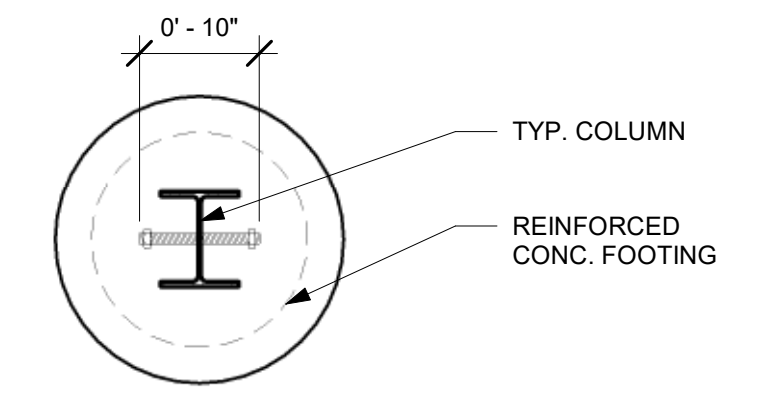
2 MOTORCYCLE SHED (MC) - ROOF PLAN
1/8" = 1'-0"



A VIC AXON VIEW (MOTORCYCLE SIM.)



5 ALTERNATE FOOTING DTL.
1/2" = 1'-0"



6 BOLT THROUGH COLUMN DETAIL
3/4" = 1'-0"

- GENERAL NOTES:**
1. COORD. NUMBER OF BAYS W/ OWNER
 2. COLUMNS, & BEAMS MUST BE PAINTED WITH PRIMED RED OXIDE
 3. PLACE CONCRETE AGAINST UNDISTURBED EARTH
 4. ALL COLD FORMED MATERIAL DESIGNED IN ACCORDANCE WITH 2007 EDITION OF AISI

THE HILL FIRM
ARCHITECT

6003 OLD GREENWOOD RD, SUITE D, FT. SMITH, AR 72603
PH: 479.494.1808 - WWW.HILLFIRM.NET

#	DATE	COMMENTS
3	11/04/20	PLUMBING COORDINATION

Insurance Auto Auction, Inc.
430 Two Notch Rd.
Lexington, South Carolina 29073

PERMIT - CONSTRUCTION DOCUMENTS

11/06/20

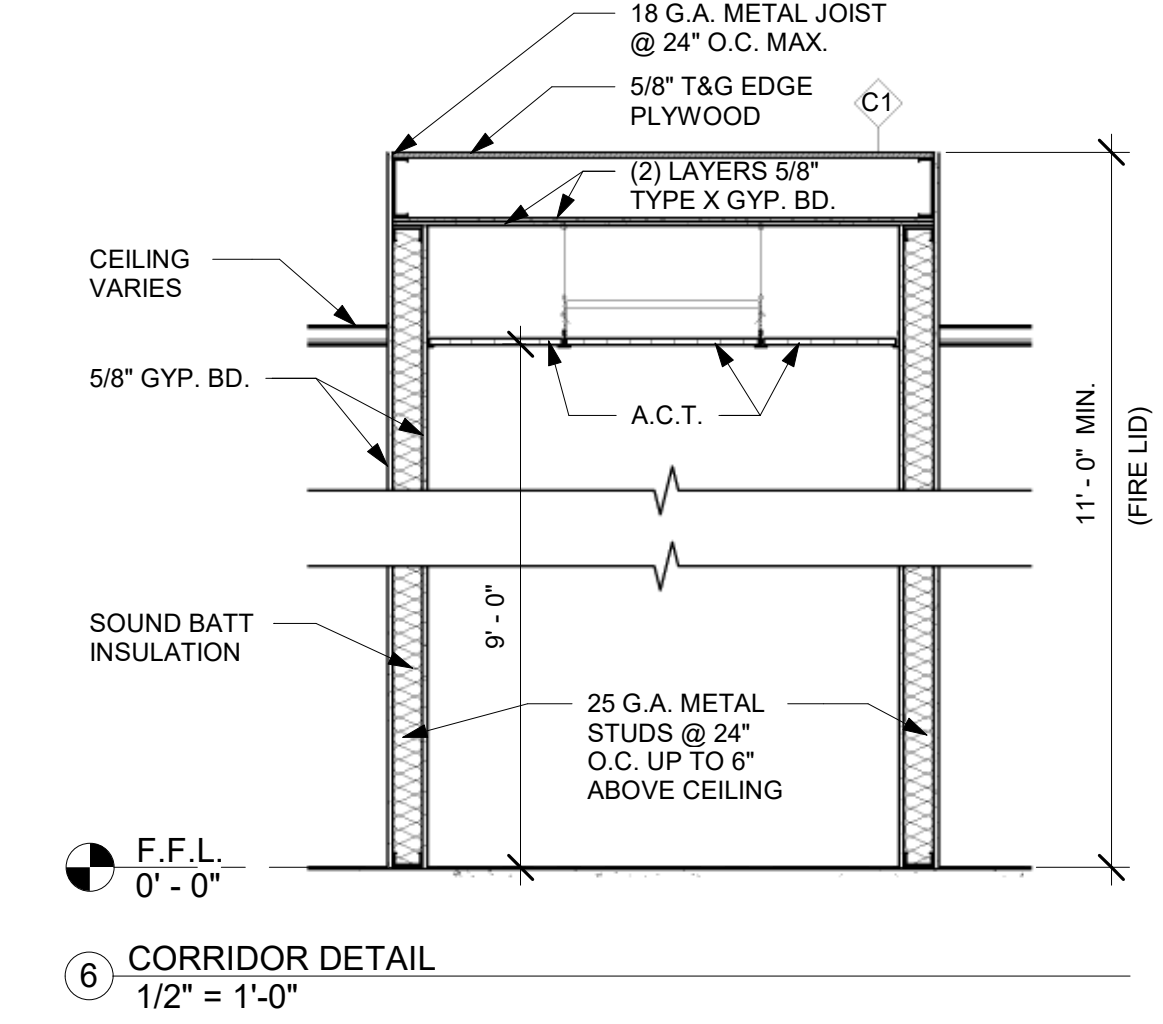
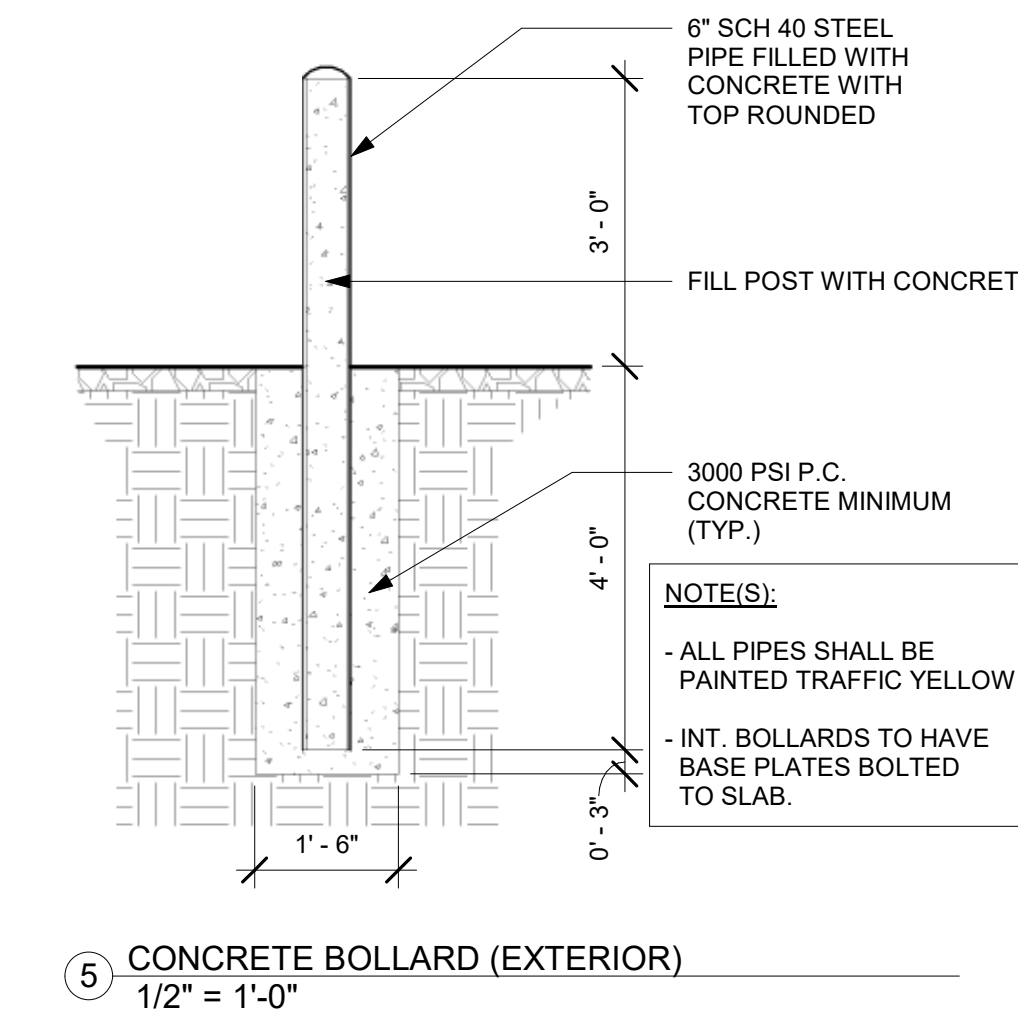
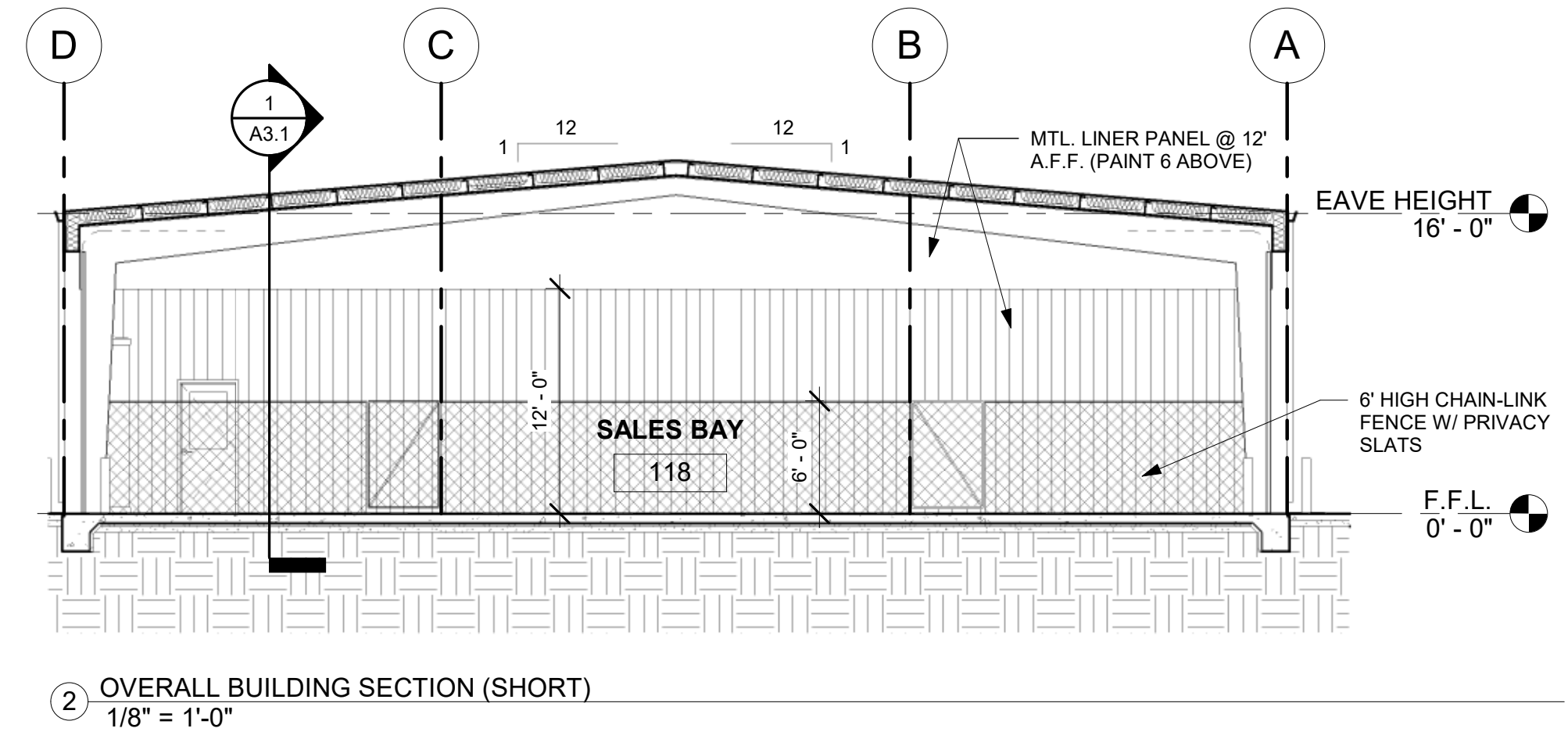
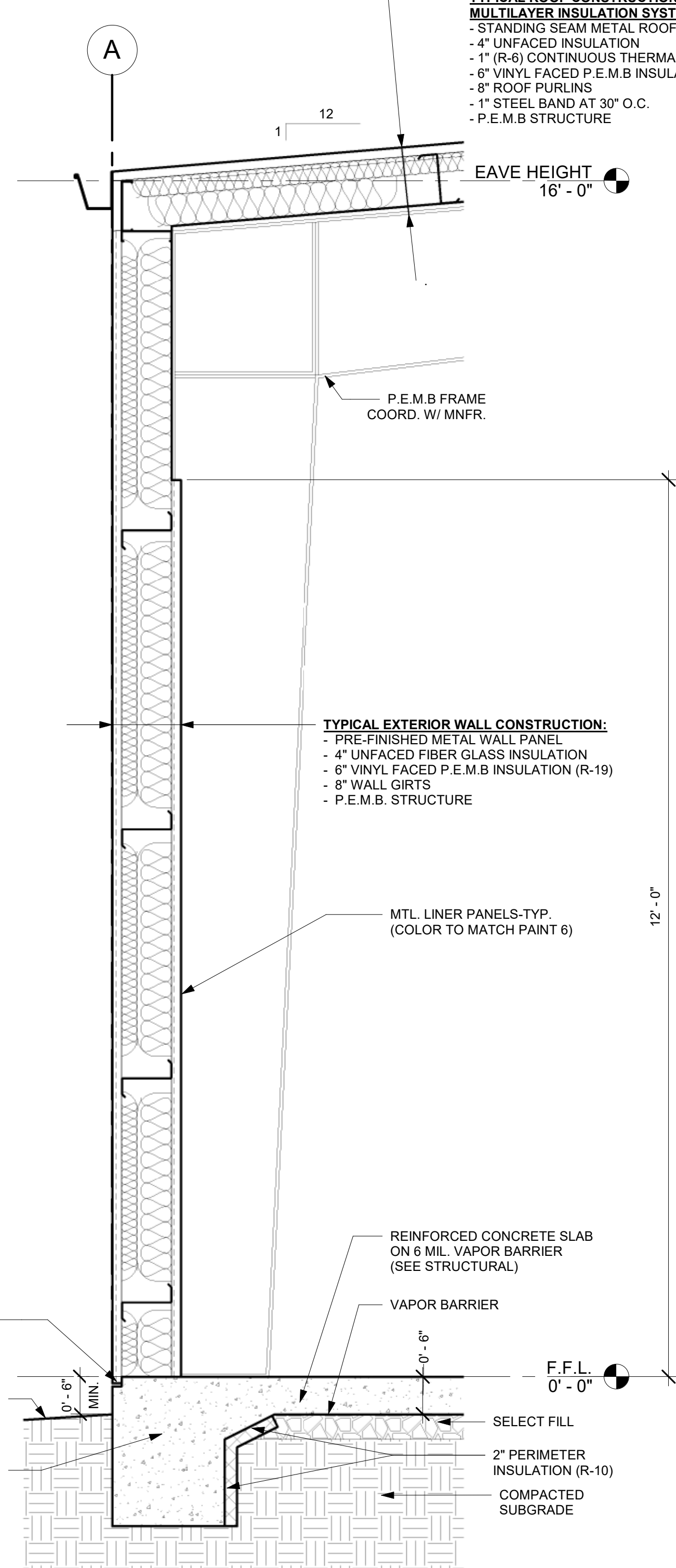
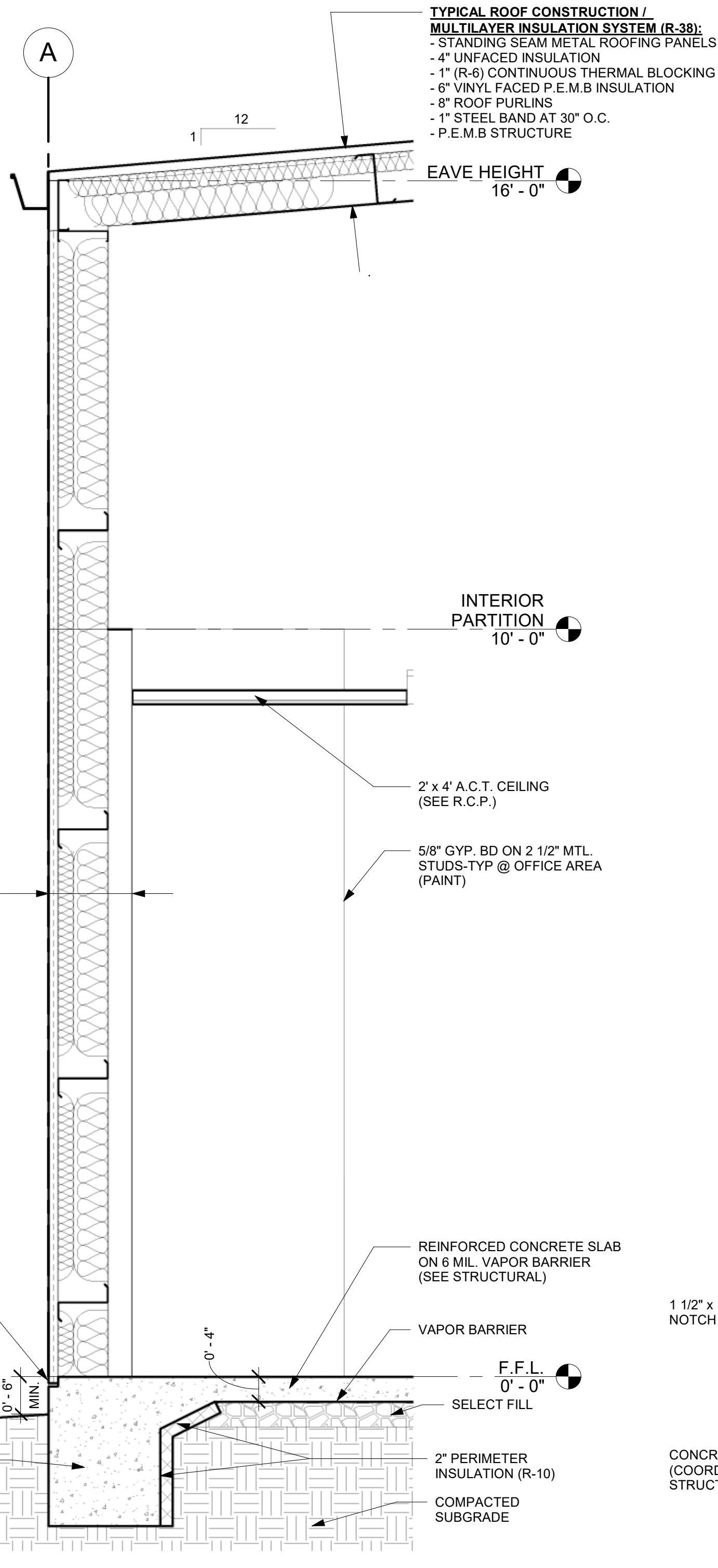
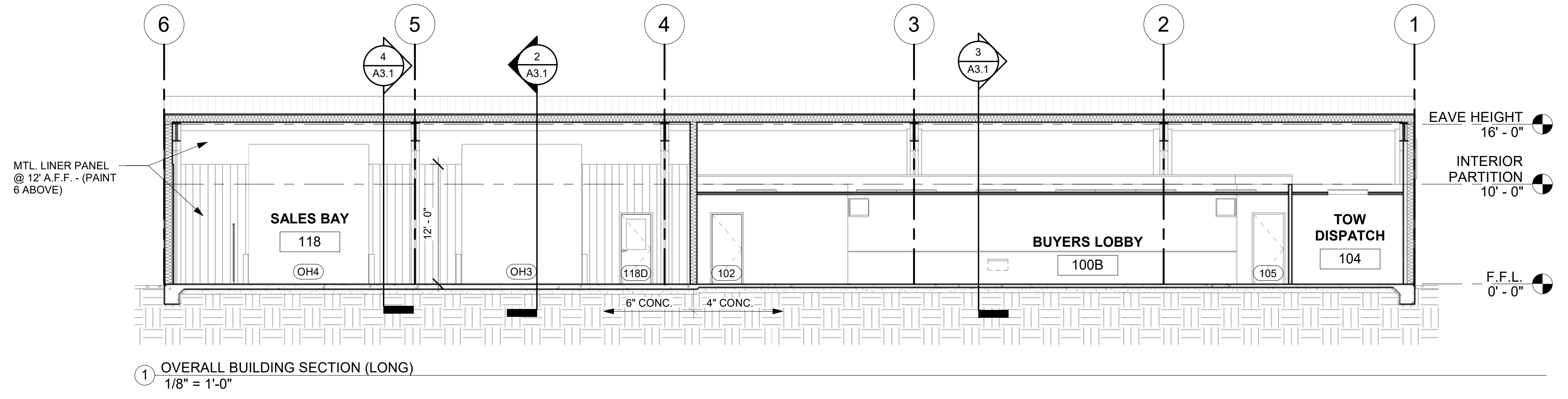
STATE OF SOUTH CAROLINA
KEVIN A. AUSTON
Fort Smith, AR
No. 10444
REGISTERED ARCHITECT

VIC FLOOR PLAN,
SECTION &
DETAILS

DATE: 05/13/2020 JOB NO. 2020-09

SHEET: **A2.2**

STATE OF SOUTH CAROLINA
THE HILL FIRM
INC.
Fort Smith, AR
No. 101657
REGISTERED ARCHITECTS



#	DATE	COMMENTS

Insurance Auto Auction, Inc.
430 Two Notch Rd.
Lexington, South Carolina 29073

PERMIT - CONSTRUCTION DOCUMENTS

05/13/20

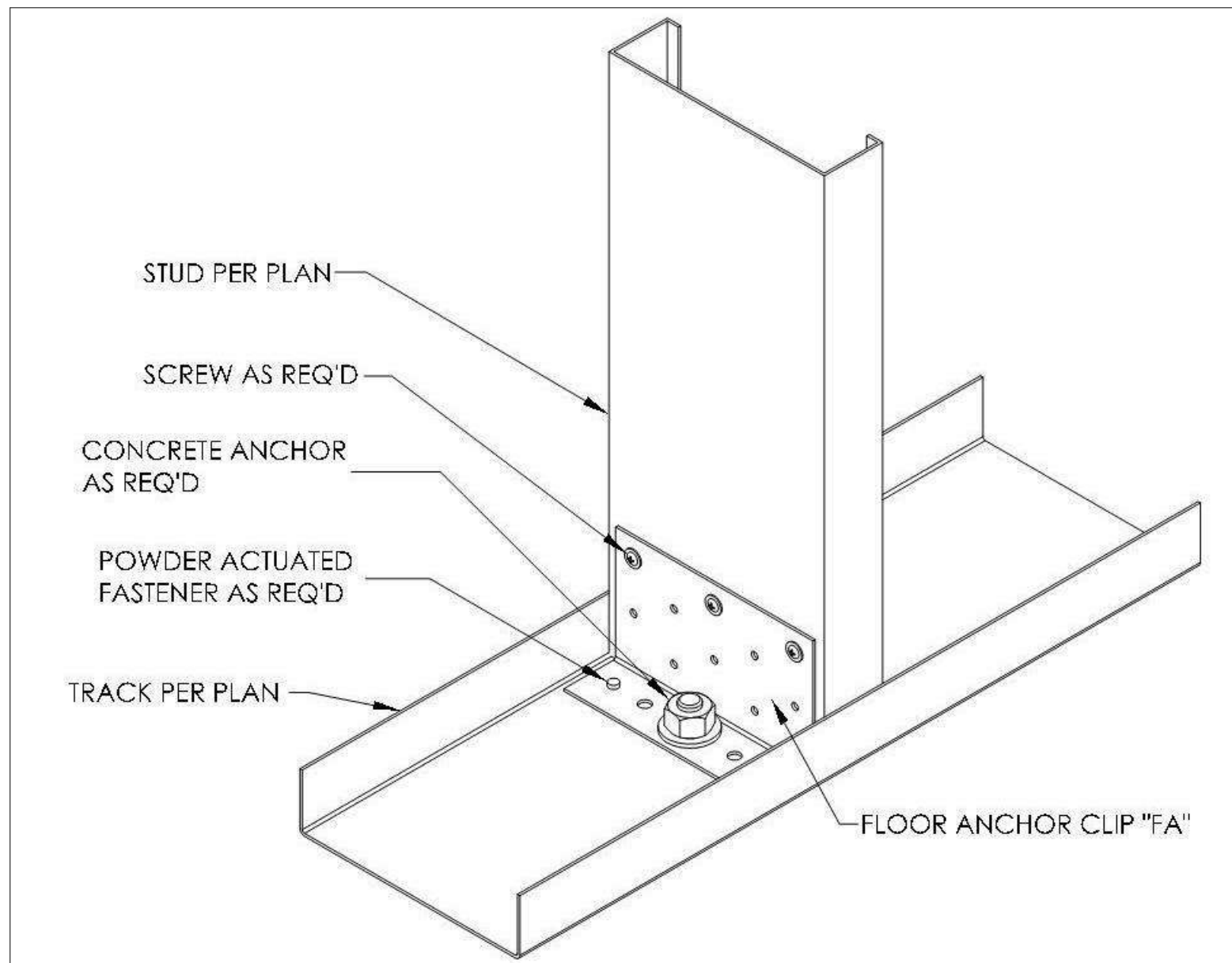
STATE OF SOUTH CAROLINA
KEVIN A. AUBREY
Fort Smith, AR
No. 10444
REGISTERED ARCHITECT

OVERALL BUILDING SECTIONS & DETAILS

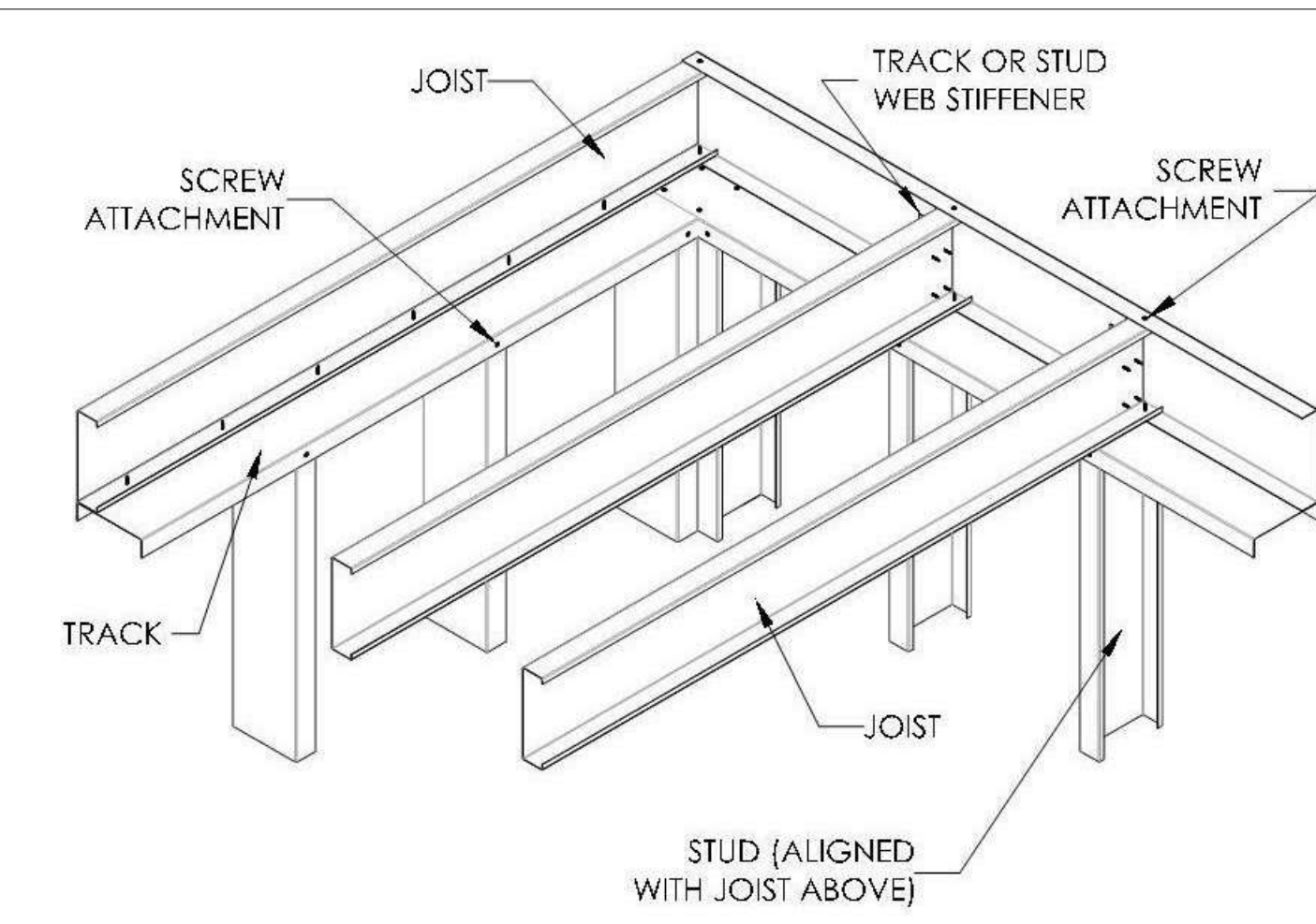
DATE: 05/13/2020 JOB NO. 2020-09

SHEET: A3.1

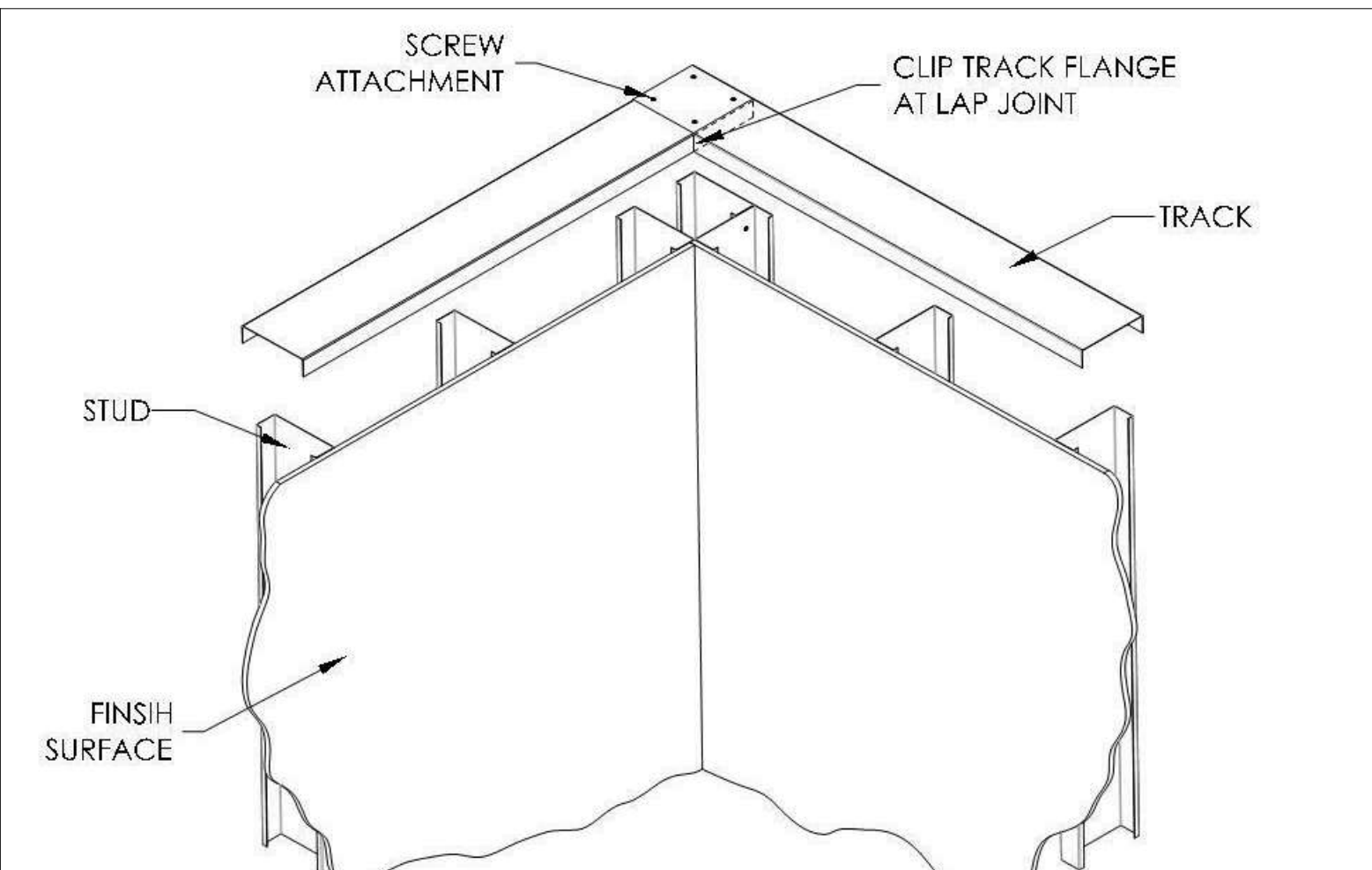




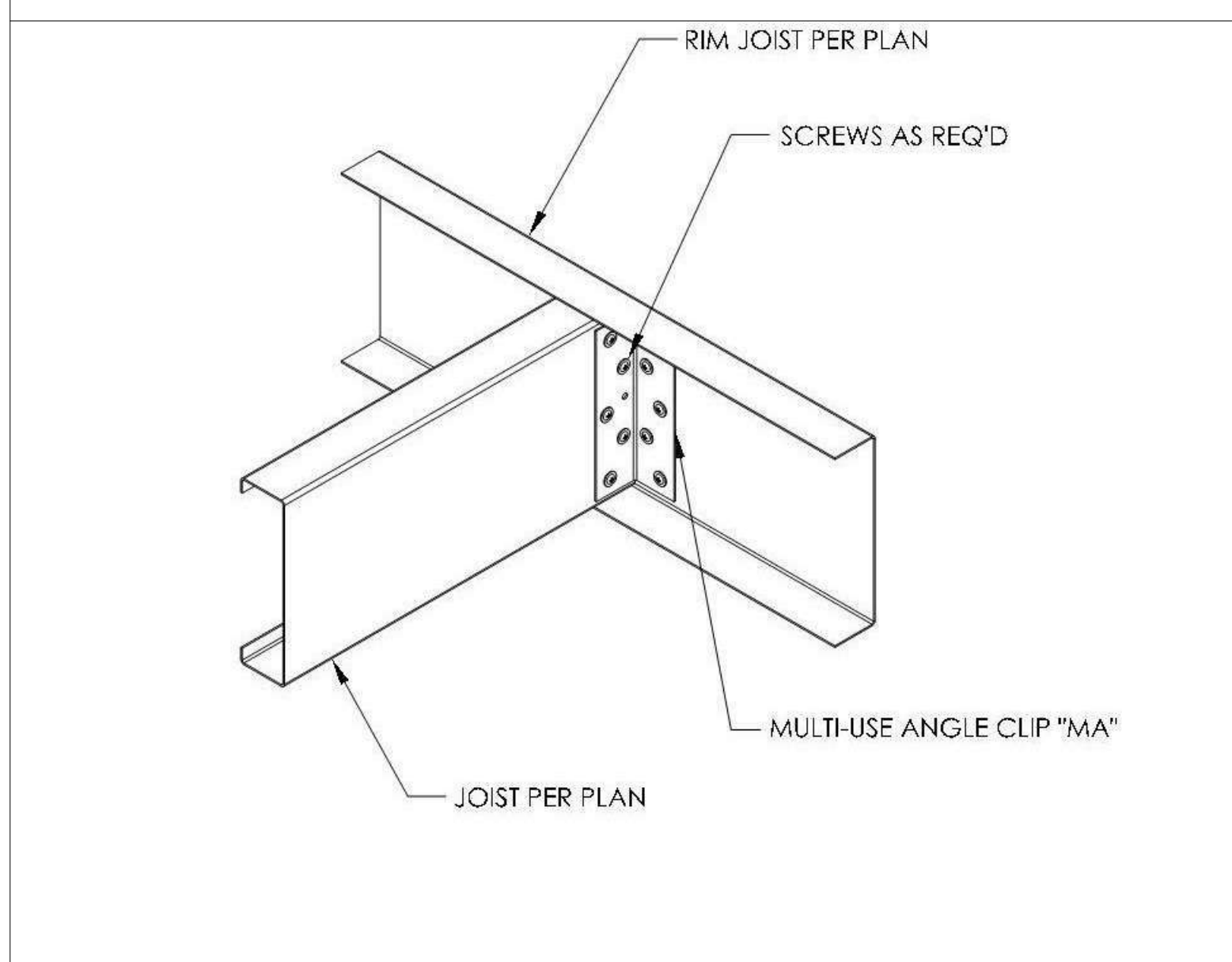
FA-1 Stud to Floor Anchoring Detail
XX NTS



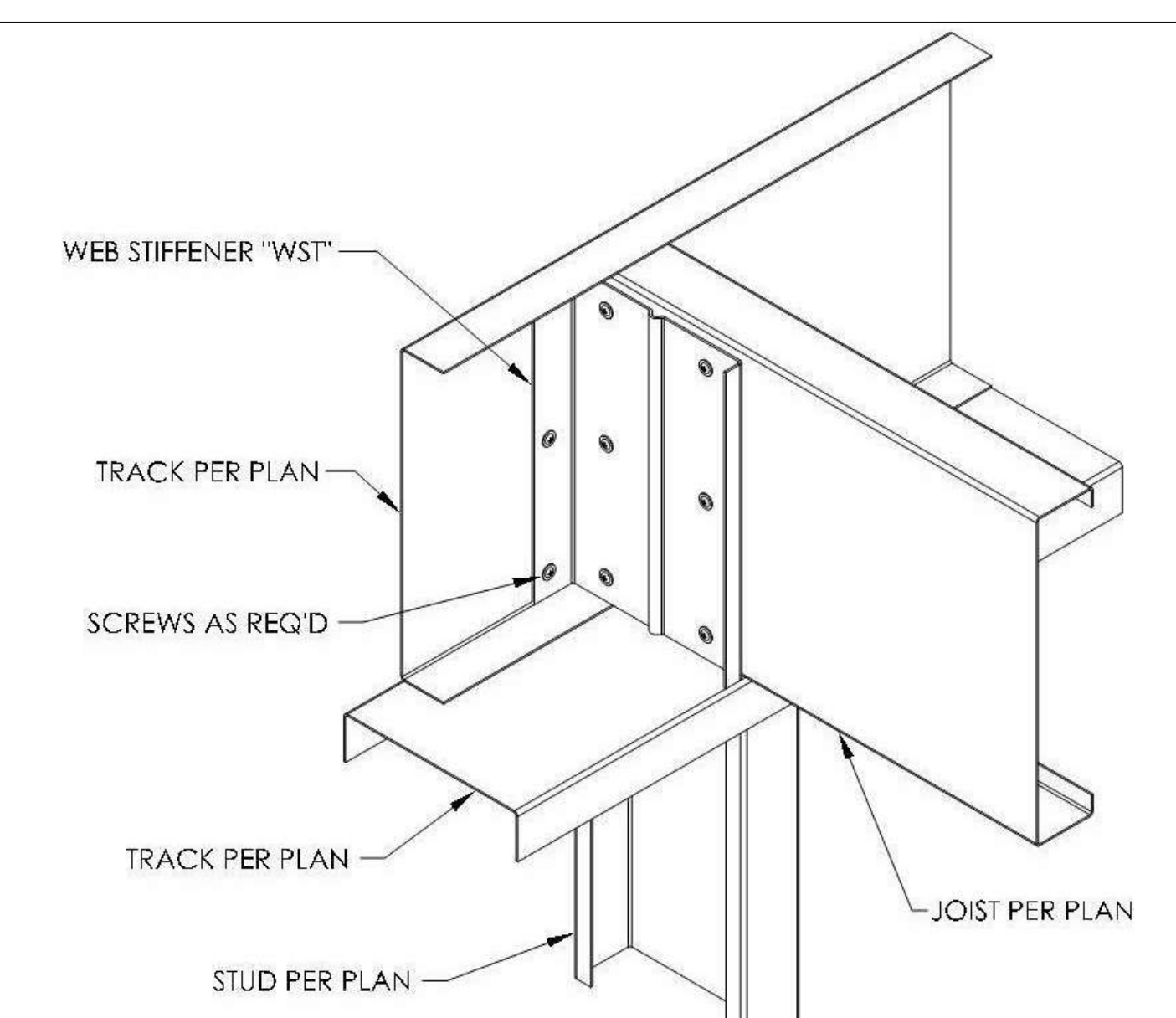
FLR-1 Typical Floor Framing
XX NTS



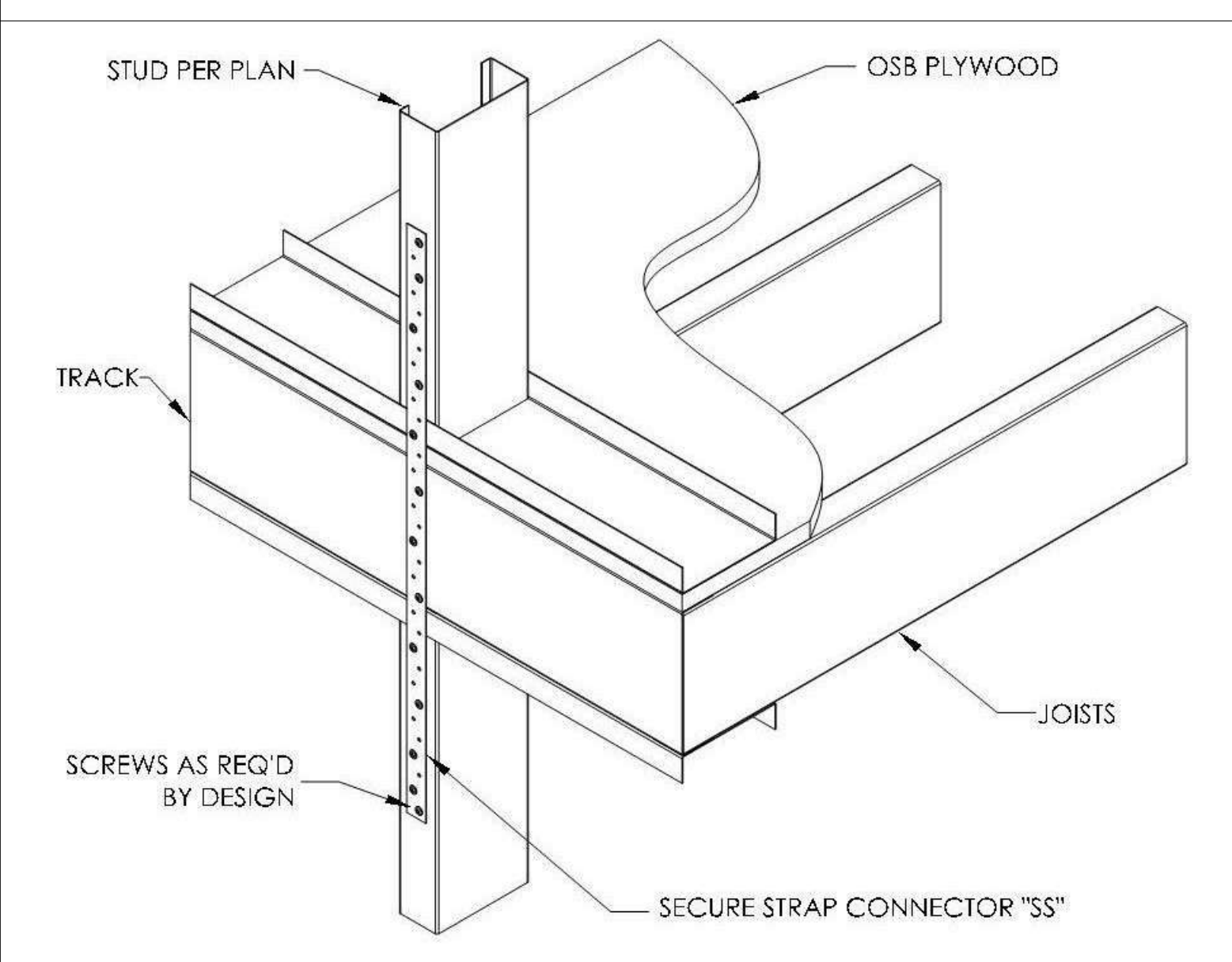
CRNR Wall Framing at Corner Track Lap Connection
XX NTS



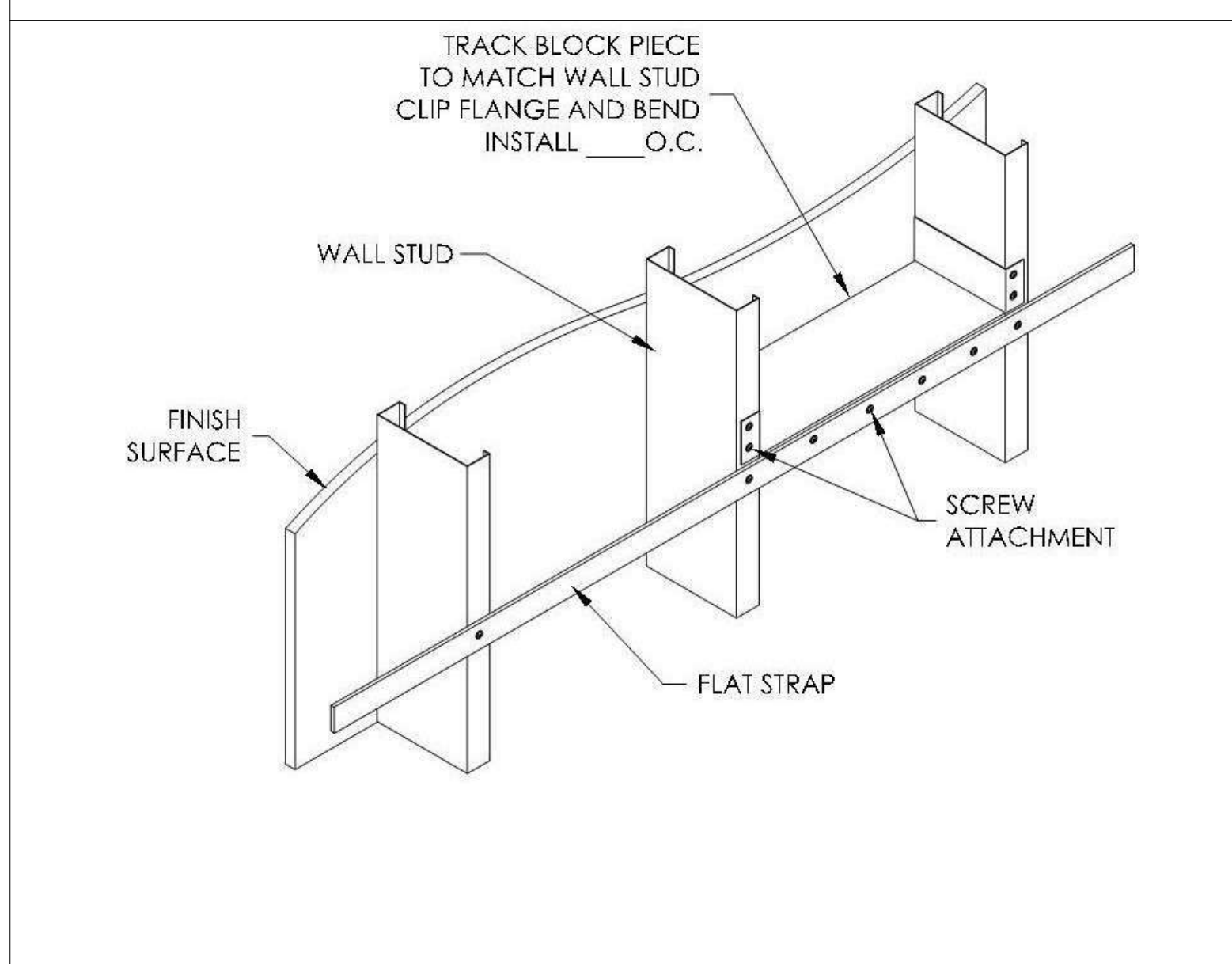
MA-2 Joist to Joist Detail
XX NTS



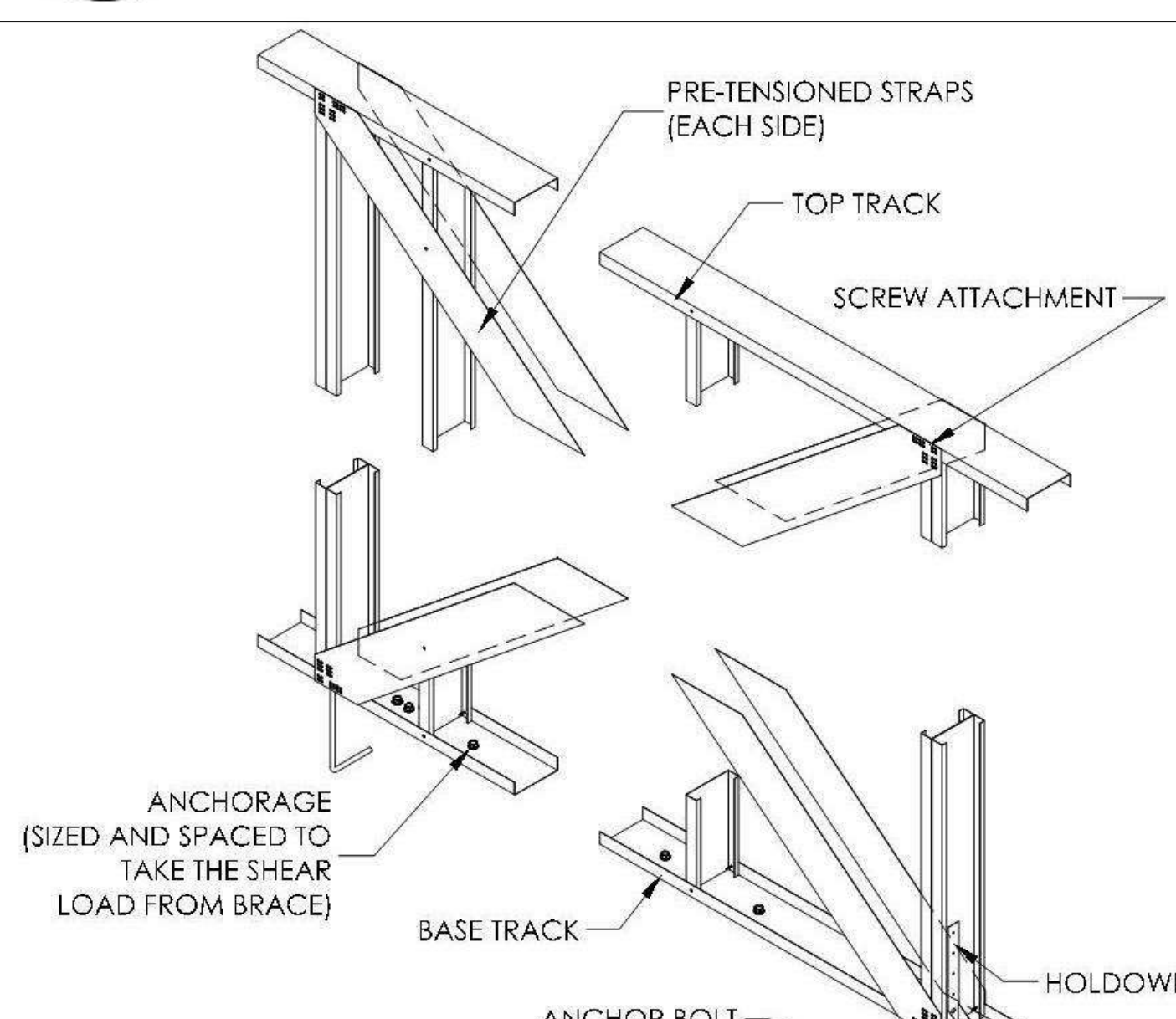
WST-1 Joist Web Stiffener (End Support)
XX NTS



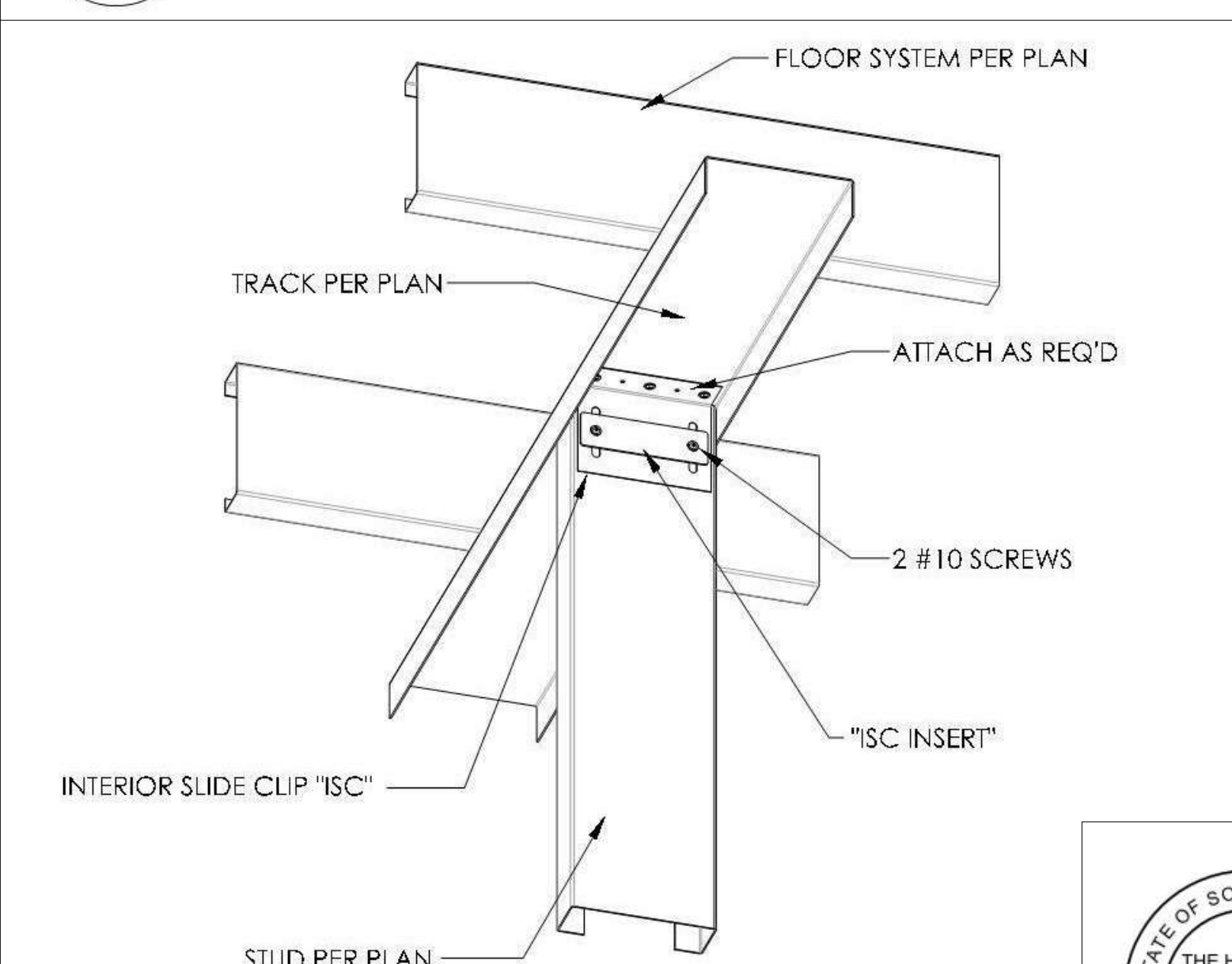
SS-1 Secure Strap Connector Detail
XX NTS



BRG-2 Bridging Single Flat Strap With Blocking
XX NTS



XBRC Shearwall X-Bracing
XX NTS



ISC-1 ISC Head of Wall Detail
XX NTS

#	DATE	COMMENTS

Insurance Auto Auction, Inc.
430 Two Notch Rd.
Lexington, South Carolina 29073

PERMIT - CONSTRUCTION DOCUMENTS

05/13/20
STATE OF SOUTH CAROLINA
REGISTERED ARCHITECT
KEVIN ALBORN
Professional Seal No. 10444

STEEL FRAMING DETAILS

DATE: 05/13/2020 JOB NO. 2020-09
SHEET:

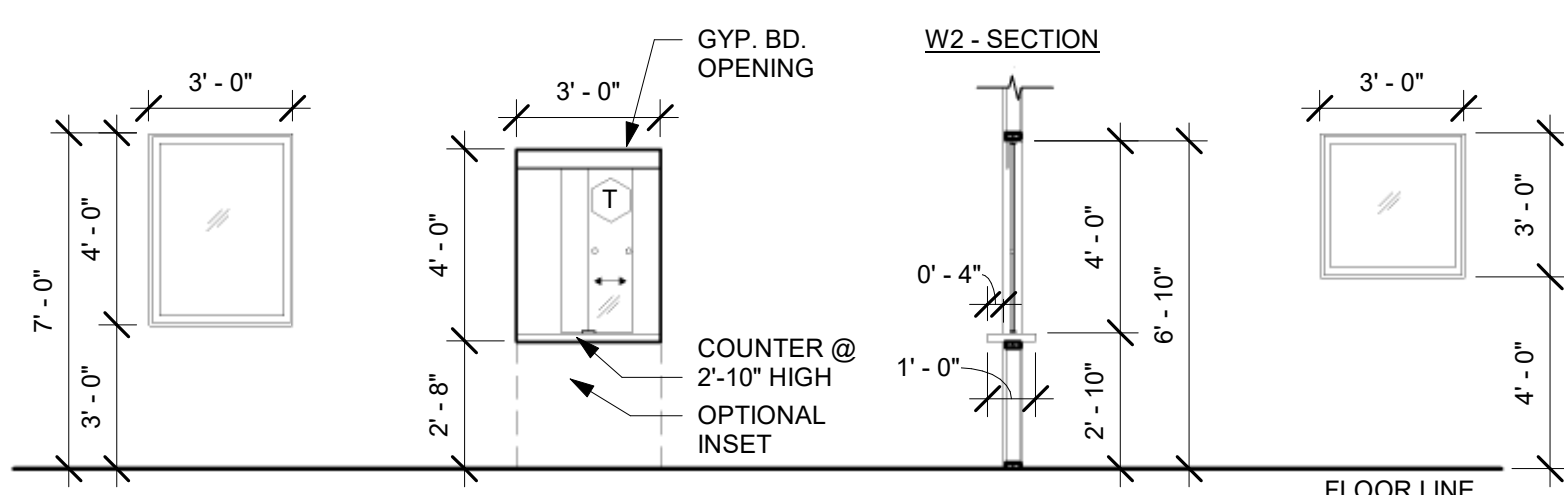
STATE OF SOUTH CAROLINA
REGISTERED ARCHITECTS
THE HILL FIRM
INC.
Fort Smith, AR
No. 101657

A3.2

DOOR MARK	DOOR			MAT.	TYPE	GLASS	FRAME		Fire Rating	SET	HARDWARE COMMENTS/ HARDWARE
	W	H	T				MAT.	TYPE			
100A	3'-0"	7'-0"	0'-1 3/4"	Alum. & Glass	10" Bottom Rail	1/4"	Alum./Black	Exterior		Entry	Push Bar / Closer / M.T.
100B	3'-0"	7'-0"	0'-1 3/4"	Alum. & Glass	10" Bottom Rail	1/4"	Alum./Black	Exterior		Entry	Push Bar / Closer / M.T.
100C	3'-0"	7'-0"	0'-1 3/4"	Alum. & Glass	10" Bottom Rail	1/4"	Alum./Black	Exterior		Entry	Push Bar / Closer / M.T.
100D	3'-0"	7'-0"	0'-1 3/4"	Alum. & Glass	10" Bottom Rail	1/4"	Alum./Black	Exterior		Entry	Push Bar / Closer / M.T.
101	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M			Storeroom	
102	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M			Privacy	Closer
103A	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M			Privacy	Closer
104	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M			Privacy	Closer / Kick Plate(s)
105	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M			Push Button	Closer / KickPlate(s) / Key Pad to Lobby
106	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M			Classroom	
107	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M		20 MIN.	Classroom	
108A	3'-0"	7'-0"	0'-1 3/4"	Metal	3'-0" x 7'-0"	N/A	P.E.M.B.	Exterior		Entry	Closer / M.T.
108D	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M		20 MIN.	Push Button	Closer / KickPlate(s) / Key Pad to Corridor
109	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M		20 MIN.	Passage	KickPlate(s)
110	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M		20 MIN.	Passage	Closer
111	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M		20 MIN.	Passage	Closer
112	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M		20 MIN.	Storeroom	Vent Louver in lower portion of Door
113	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M		20 MIN.	Push Button	Key Pad to Corridor
114	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M		20 MIN.	Push Button	Key Pad to Corridor
115	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M		20 MIN.	Push Button	Key Pad to Corridor
117	3'-0"	7'-0"	0'-1 3/4"	Wood	3'-0" x 7'-0"	N/A	H.M		20 MIN.	Classroom	
118A	3'-0"	7'-0"	0'-1 3/4"	Metal	3'-0" x 7'-0"	1/2 Glass	P.E.M.B.	Exterior		Entry	Closer / Kick Plate(s) / M.T.
118B	3'-0"	7'-0"	0'-1 3/4"	Metal	3'-0" x 7'-0"	N/A	H.M		3/4 HR.	Push Button	Closer / Kick Plate(s) / M.T. / Key Pad to Lobby
118C	3'-0"	7'-0"	0'-1 3/4"	Metal	3'-0" x 7'-0"	N/A	H.M		3/4 HR.	Push Button	Closer / KickPlate(s) / M.T. / Key Pad to Sales Bay
118D	3'-0"	7'-0"	0'-1 3/4"	Metal	3'-0" x 7'-0"	1/2 Glass	P.E.M.B.	Exterior		Entry	Closer / Kick Plate(s) / M.T.
118E	3'-0"	7'-0"	0'-1 3/4"	Metal	3'-0" x 7'-0"	1/2 Glass	P.E.M.B.	Exterior		Entry	Closer / Kick Plate(s) / M.T.
118F	4'-0"	6'-0"		Chain-Link	Gate	N/A	CHAIN-LINK			Fork Latch	Hinges (x3) / Lockable Latch / Privacy Slats
118G	4'-0"	6'-0"		Chain-Link	Gate	N/A	CHAIN-LINK			Fork Latch	Hinges (x3) / Lockable Latch / Privacy Slats
OH1	12'-0"	14'-0"	0'-2"	Metal	12' x 14'	N/A	P.E.M.B.			N/A	Insulated / Sectional / Automatic
OH2	12'-0"	14'-0"	0'-2"	Metal	12' x 14'	N/A	P.E.M.B.			N/A	Insulated / Sectional / Automatic
OH3	12'-0"	14'-0"	0'-2"	Metal	12' x 14'	N/A	P.E.M.B.			N/A	Insulated / Sectional / Automatic
OH4	12'-0"	14'-0"	0'-2"	Metal	12' x 14'	N/A	P.E.M.B.			N/A	Insulated / Sectional / Automatic

HARDWARE LEGEND:

KNOBS: BRAND: SCHLAGE MODEL: S SERIES TYPE: NEPTUNE (NEP) FINISH: 619 - SATIN NICKEL NOTES: STANDARD CYLINDERS	LOCKS: BRAND: SCHLAGE MODEL: FE595 TYPE: CAMELOT KEYPAD FINISH: SATIN NICKEL	CLOSERS: BRAND: YALE MODEL: 4400 SERIES TYPE: DOOR CLOSER FINISH: BLACK
--------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------

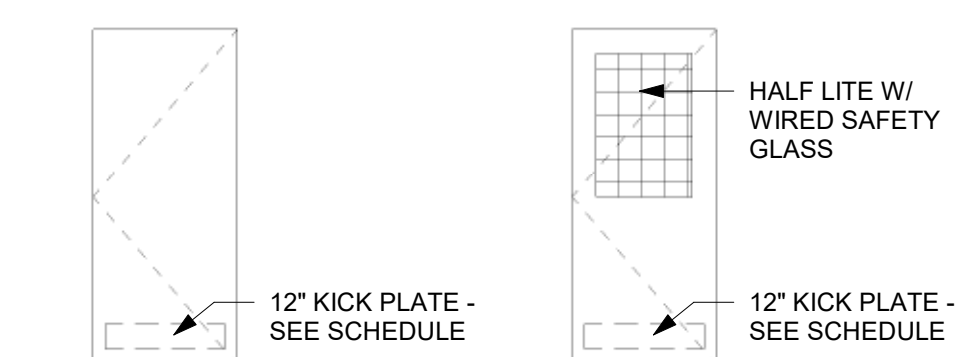


HOLLOW METAL
METAL W/ THERMAL BREAK
(DBL. PANE GLAZING) 0.50
U-FACTOR (MIN.) / 0.25 SHGC

SLIDING GLASS
TOP TRACK (ALUM.) BOTTOM
GUIDE(S) & GLASS LOCKS

WINDOW ELEVATIONS
1/4" = 1'-0"

GLAZING LEGEND
TEMPERED GLASS
@ / OR BELOW 18"



1 SINGLE FLUSH DOOR 36"x84"
1/4" = 1'-0"

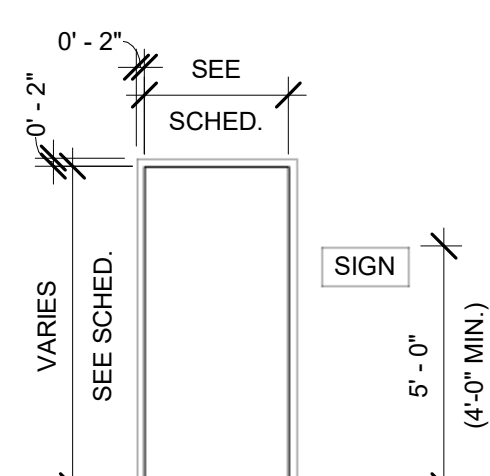
EXTERIOR H.M. - SOLID INSULATED
(POLYURETHANE INSUL.) / 083 U-FACTOR
10.00-11.00 R-VALUE (CALCULATED)

2 STOREFRONT DOORS 36" x 84"
1/4" = 1'-0"

ALUM. FRAME & GLASS, W/ THERMAL
BREAK (DBL. PANE GLAZING)
0.83 U-FACTOR (MIN.) / 0.25 SHGC

3 OVERHEAD DOOR
1/4" = 1'-0"

GARAGE DOORS (NON-SWINGING)
4.75 R-VALUE

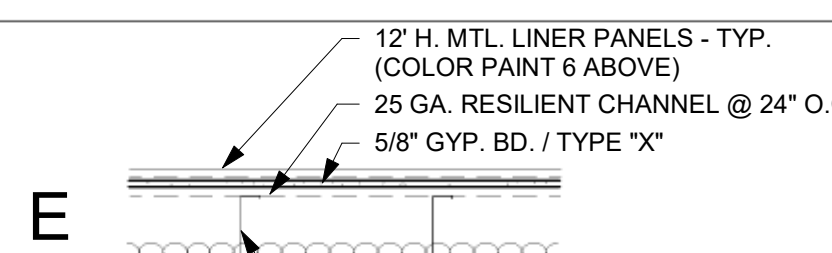
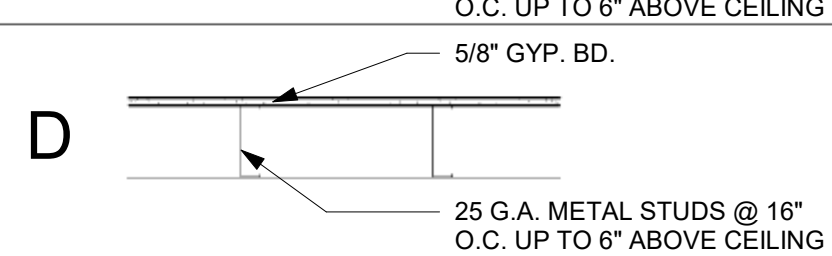
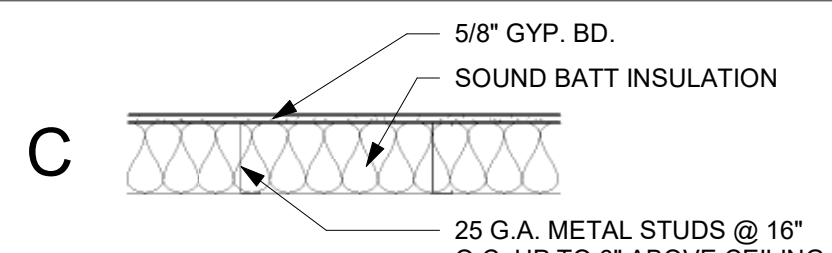
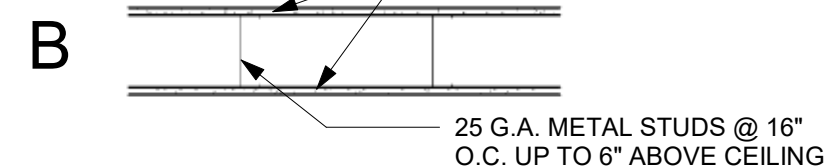
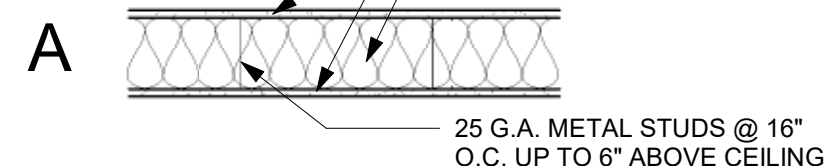


A FRAME TYPES
1/4" = 1'-0"

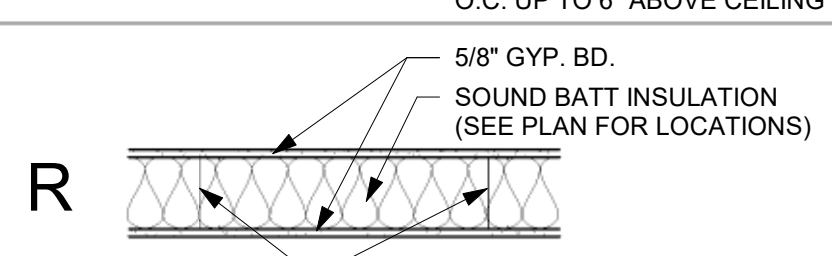
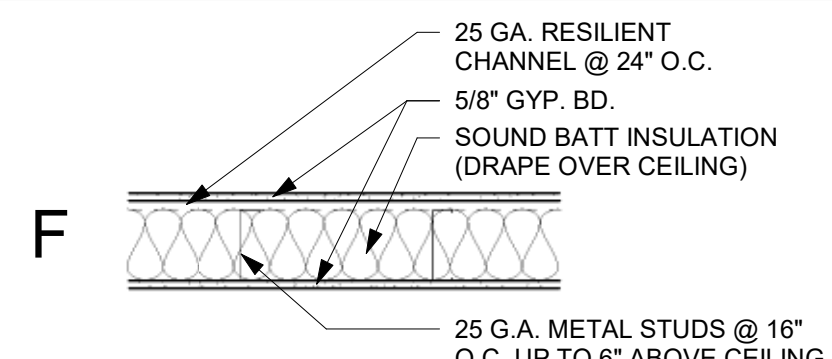
PARTITION TYPES

- SEE PLANS FOR PARTITION LOCATIONS
- PROVIDE INSULATION WHERE SHOWN ON PLANS
- COORDINATE FINISHES WITH PLAN (TENANT)
- MOISTURE RESISTANT GYP. BD. TO BE USED @ "WET" WALLS

WALL SYSTEMS



1 HR. RATING / UL U419

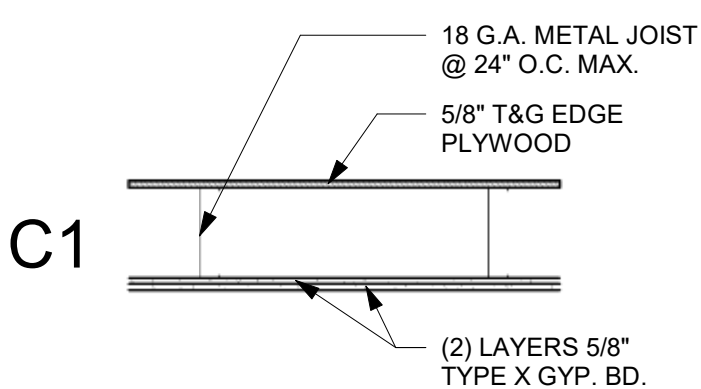


1 HR. RATING / UL U419

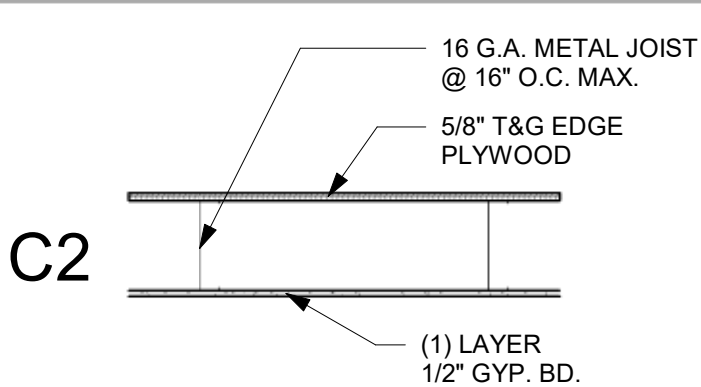
CEILING TYPES

- SEE PLANS FOR PARTITION LOCATIONS
- PROVIDE INSULATION WHERE SHOWN ON PLANS
- COORDINATE FINISHES WITH TENANT

CEILING SYSTEMS

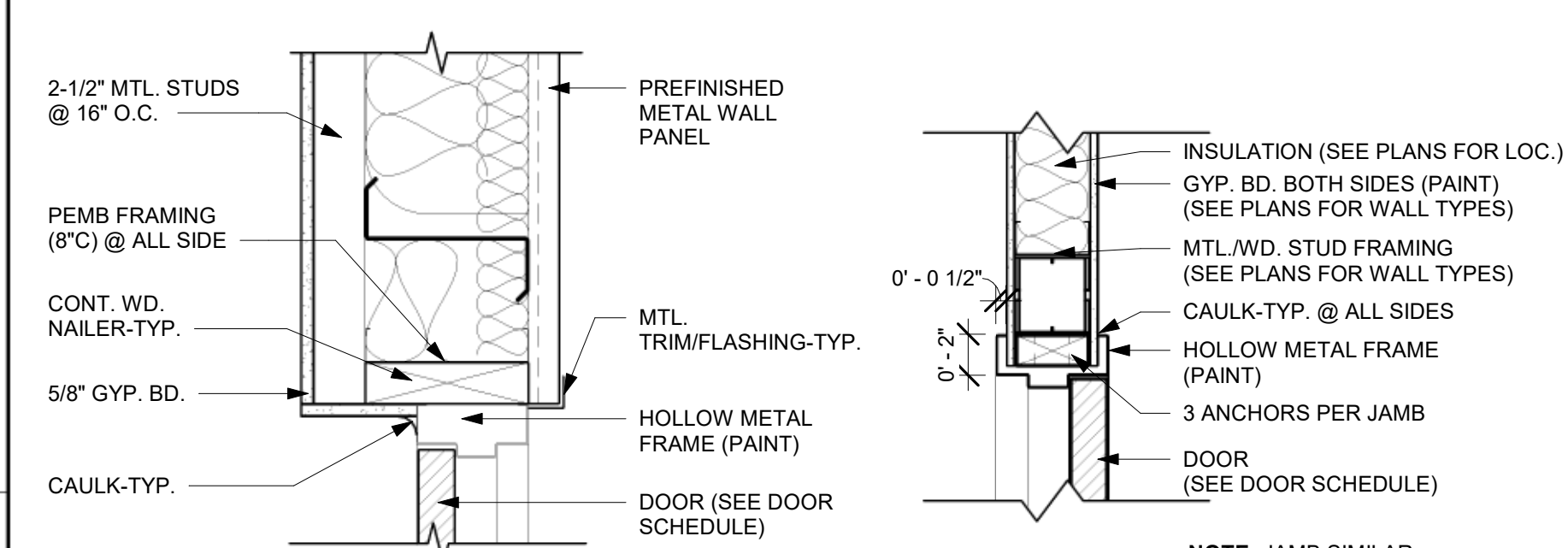
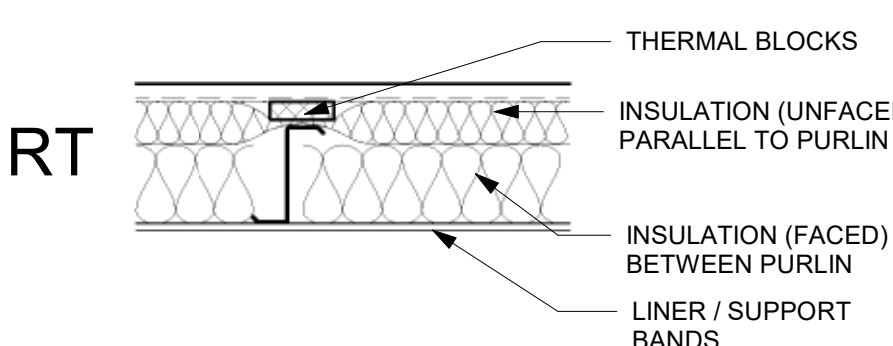


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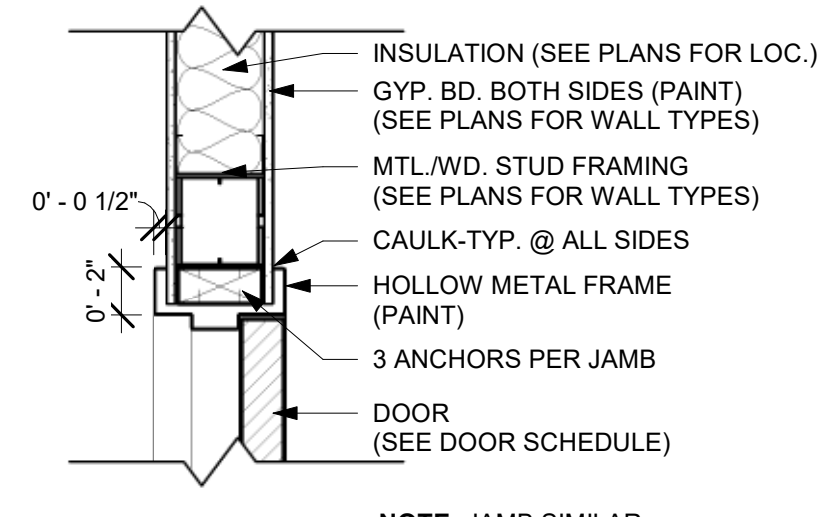


ROOF TYPE

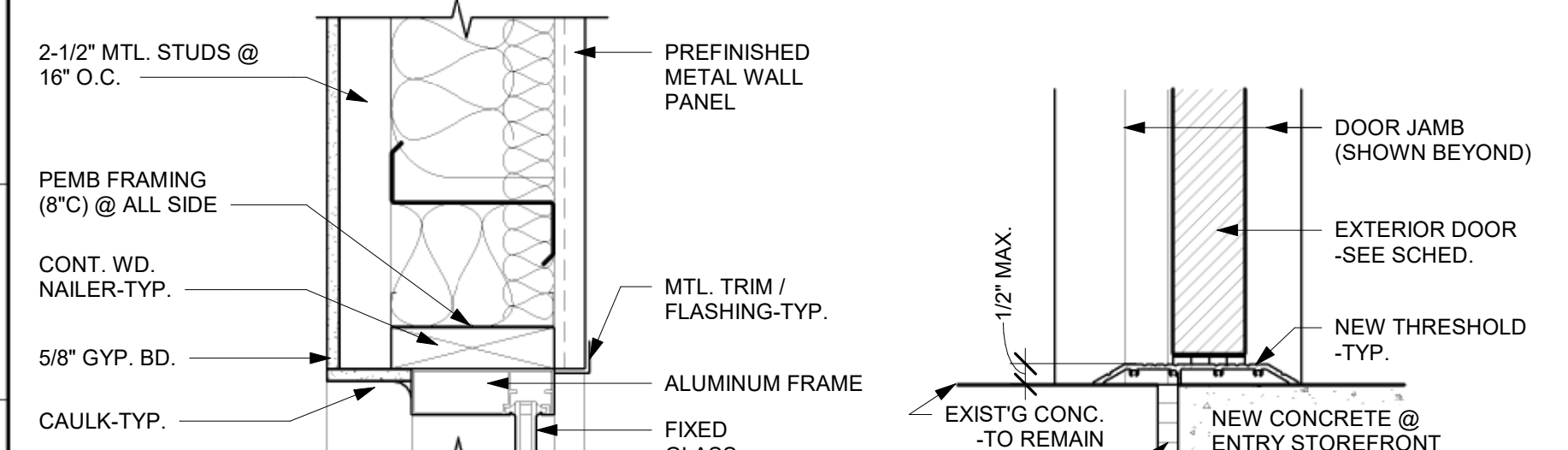
- R-19 + R-10 LS (W/ R-5 THERMAL BLOCKS)



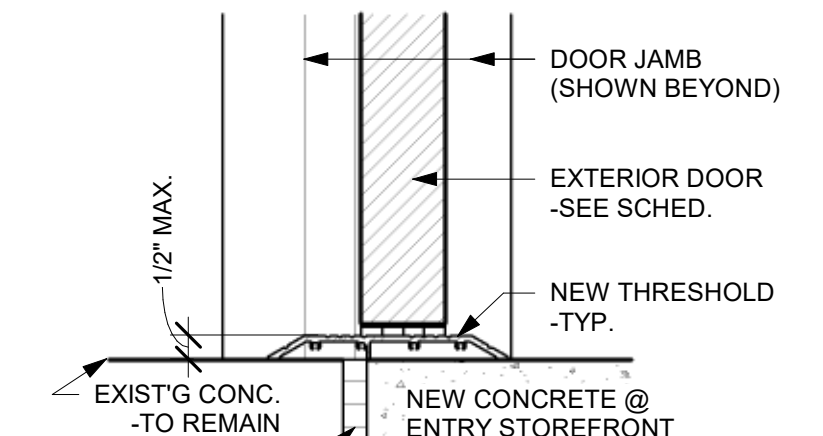
5 HD @ EXTERIOR DOOR
1 1/2" = 1'-0"



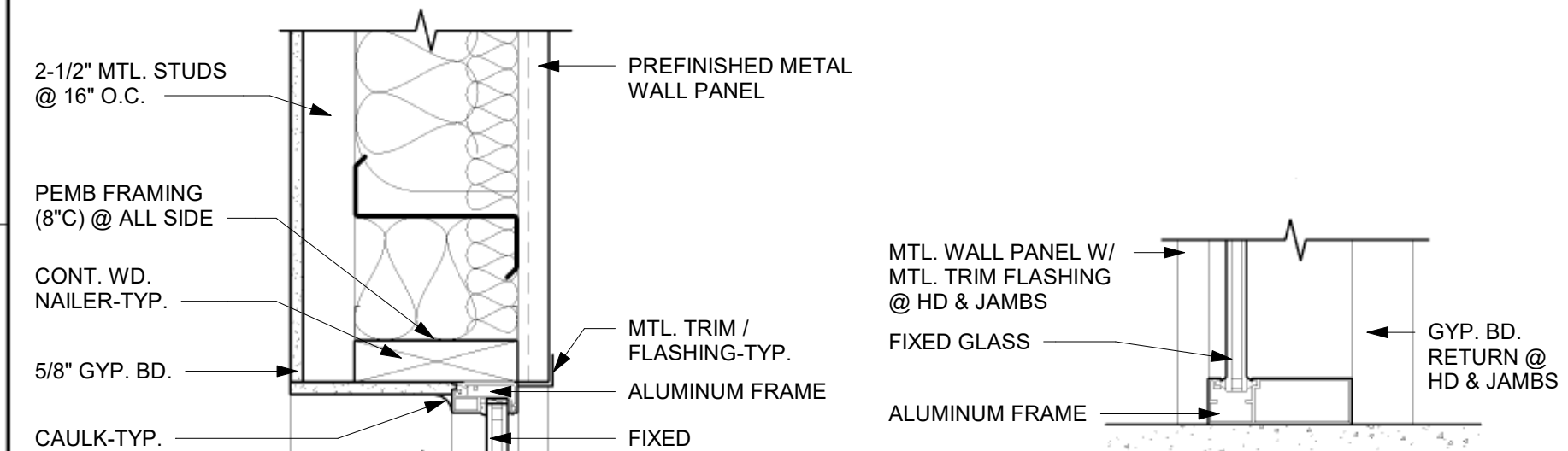
6 TYP. DETAIL @ DOOR HEAD - INTERIOR
1 1/2" = 1'-0"



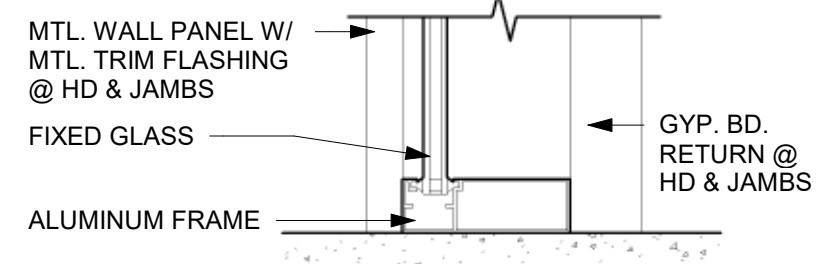
7 HD @ EXTERIOR STORE FRONT
1 1/2" = 1'-0"



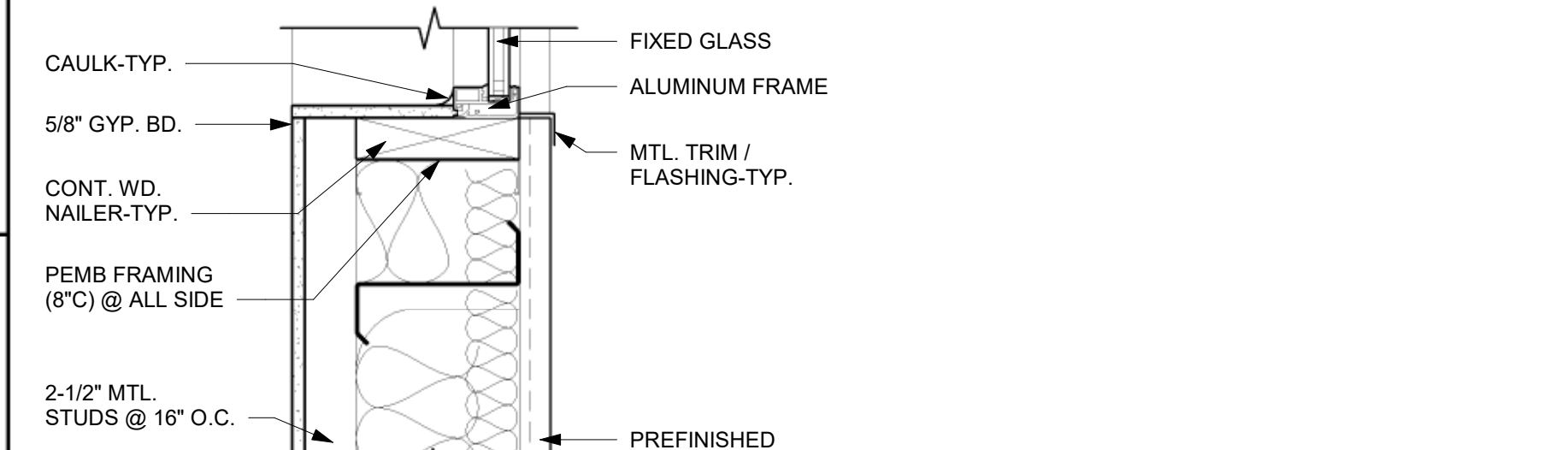
8 TYP. THRESHOLD - EXTERIOR
3" = 1'-0"



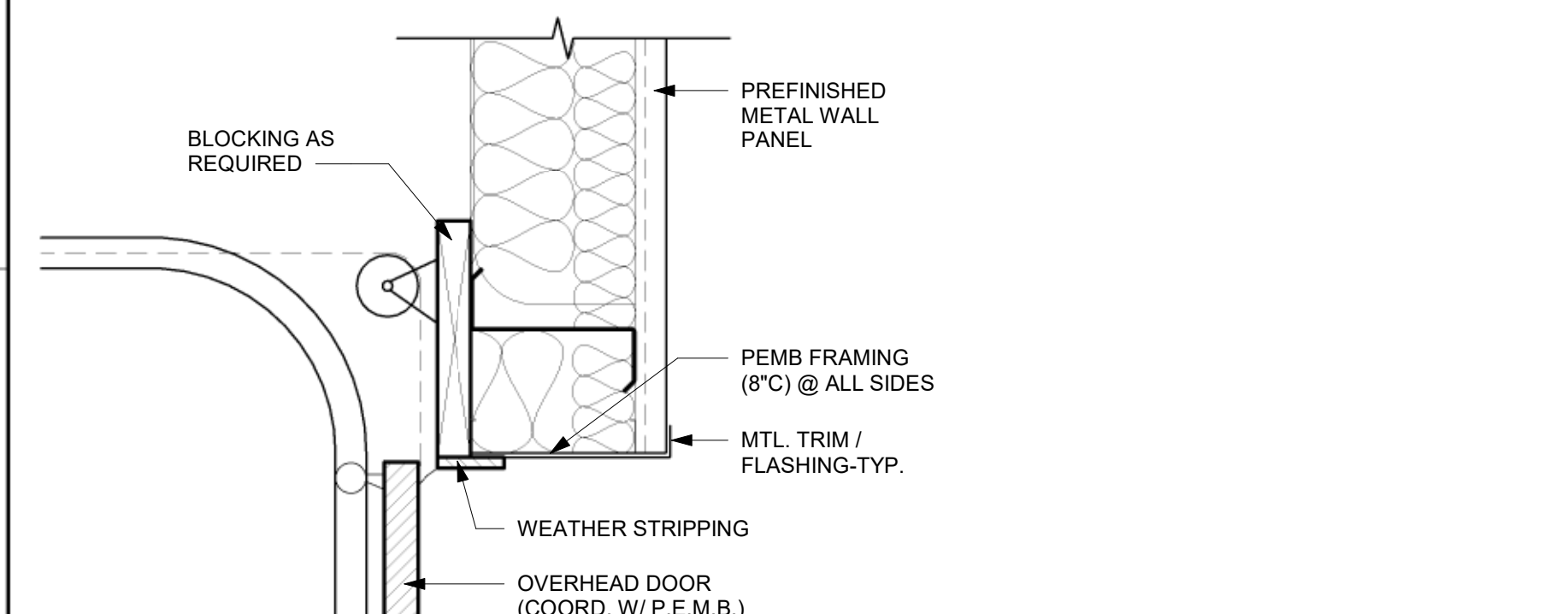
9 HD @ EXTERIOR WINDOW
1 1/2" = 1'-0"



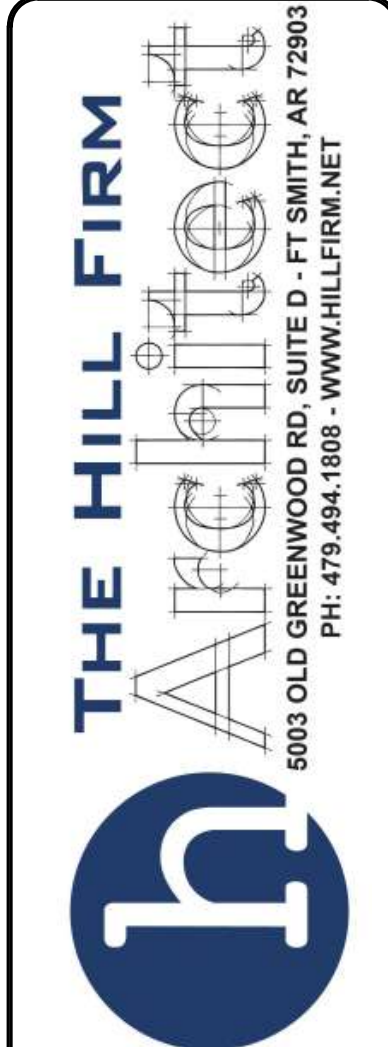
10 SILL @ STORE FRONT
1 1/2" = 1'-0"



11 SILL @ EXTERIOR WINDOW
1 1/2" = 1'-0"



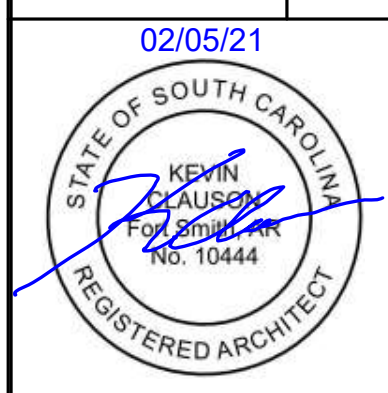
12 HD @ OVERHEAD DOOR (OPTIONAL)
1 1/2" = 1'-0"



#	DATE	COMMENTS
1	08/11/20	CIVIL & PLAN MODIFICATIONS
4	02/05/21	PLAN MODIFICATIONS

Insurance Auto Auction, Inc.
430 Two Notch Rd.
Lexington, South Carolina 29073

PERMIT - CONSTRUCTION DOCUMENTS



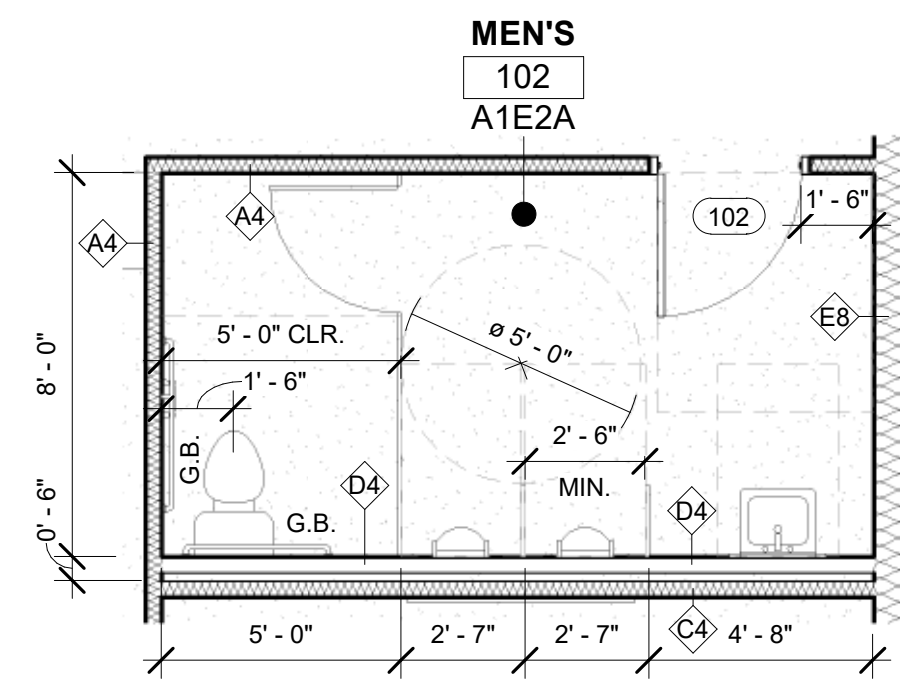
SCHEDULES & DETAILS

DATE: 05/13/2020
JOB NO: 2020-09

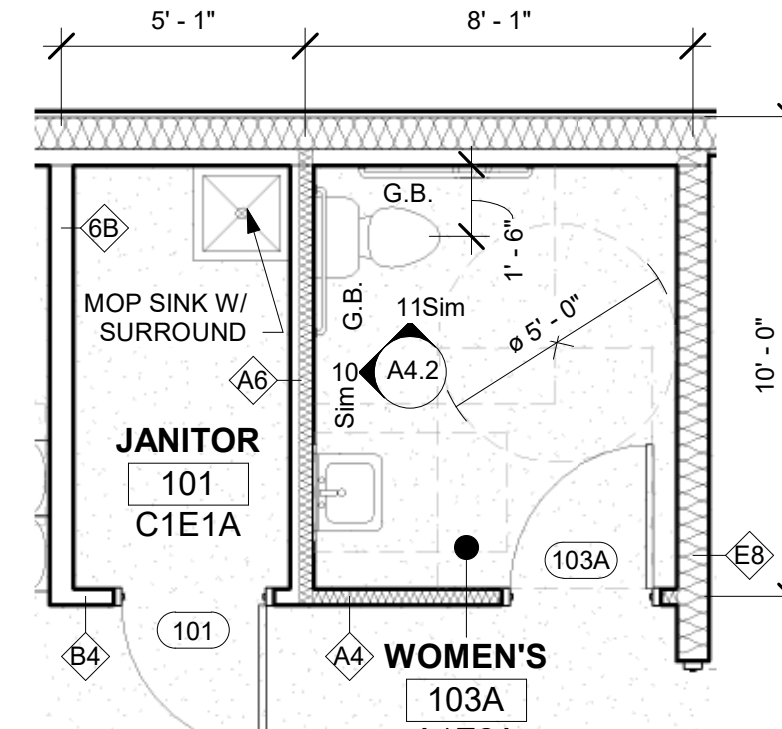
SHEET:

A4.1

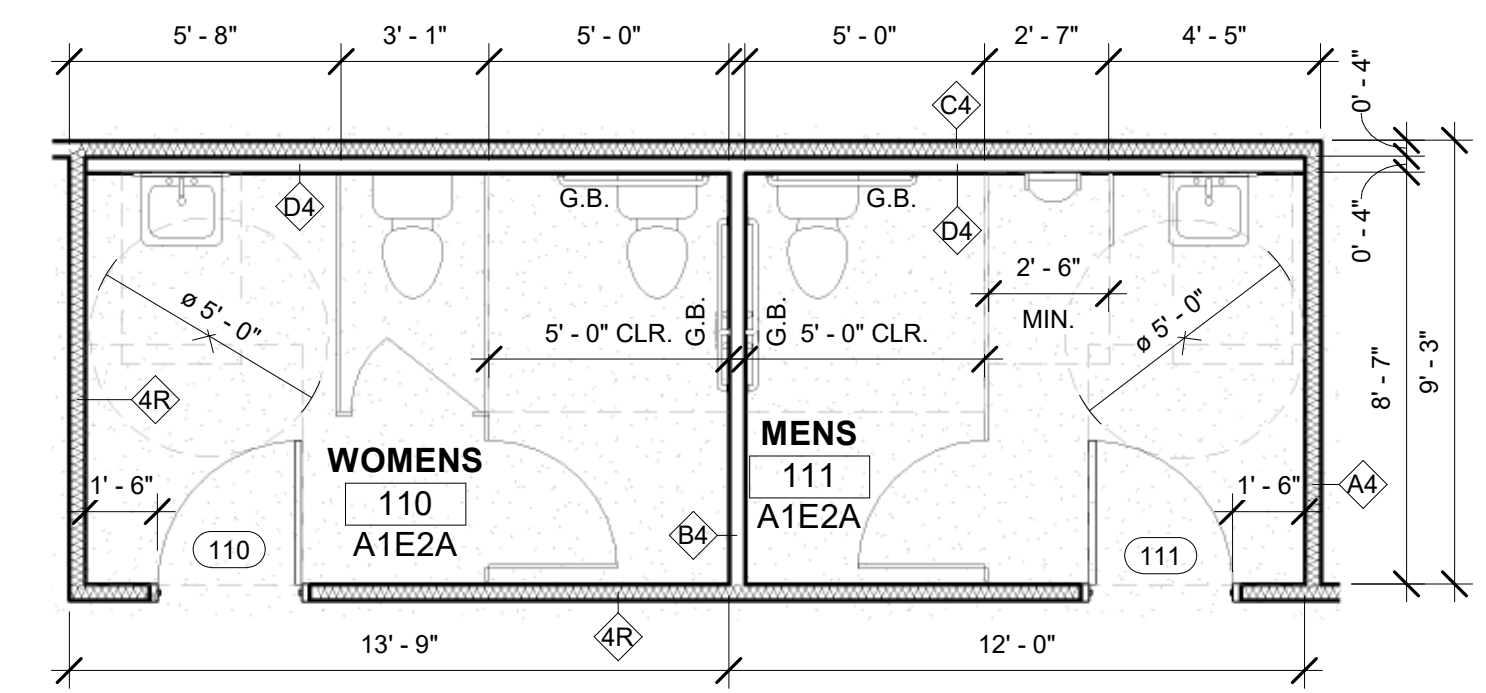




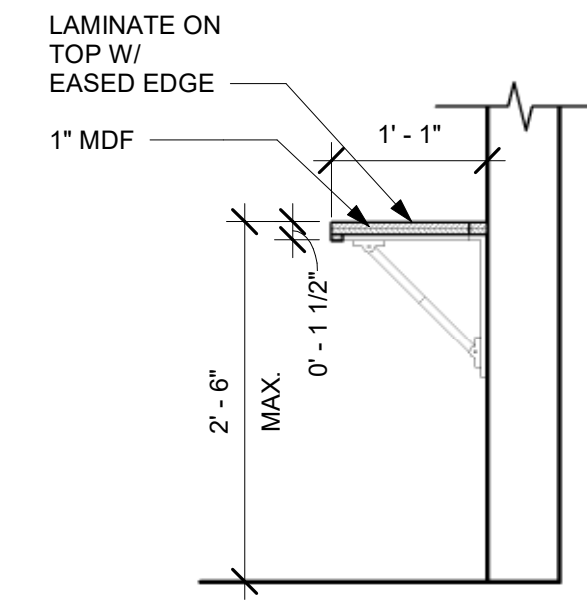
4 ENLARGED BUYERS MEN'S R.R.
1/4" = 1'-0"



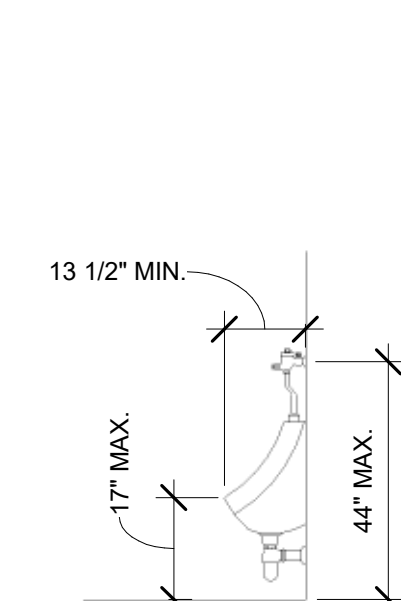
5 ENLARGED BUYERS WOMEN'S R.R.
1/4" = 1'-0"



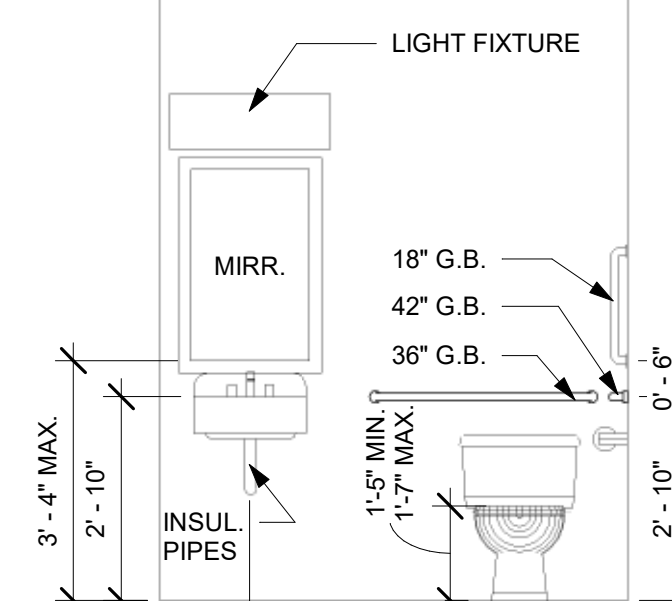
6 ENLARGED EMPLOYEE R.R.
1/4" = 1'-0"



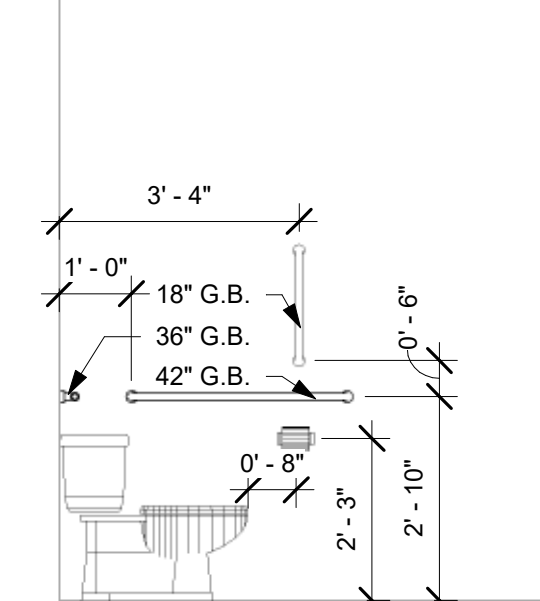
8 FOLDING COUNTER DETAIL
3/4" = 1'-0"



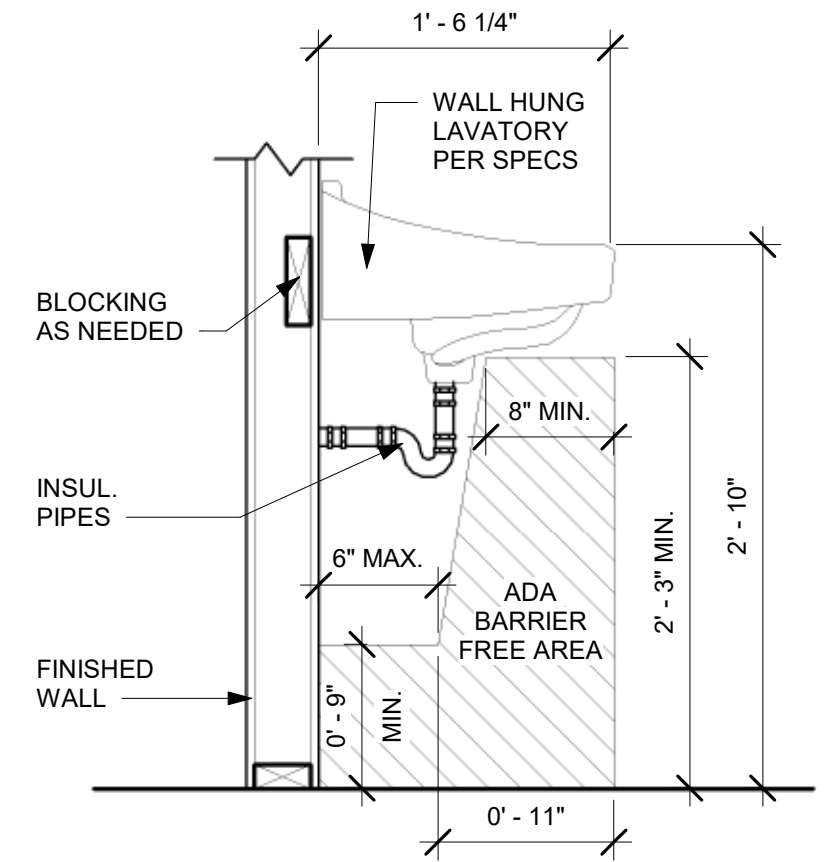
9 H/C URINAL ELEV.
3/8" = 1'-0"



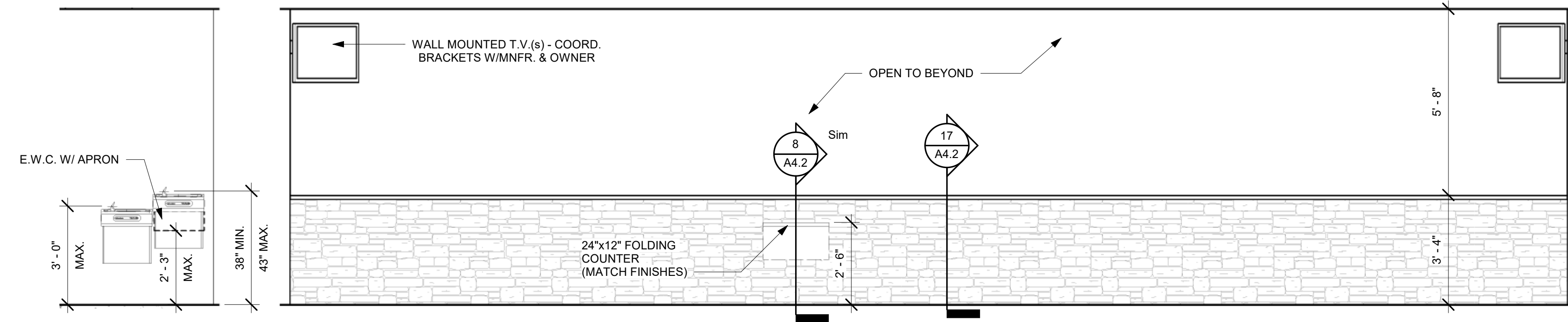
10 H/C TOILET ELEV. - FRONT
3/8" = 1'-0"



11 H/C TOILET ELEV. - SIDE
3/8" = 1'-0"

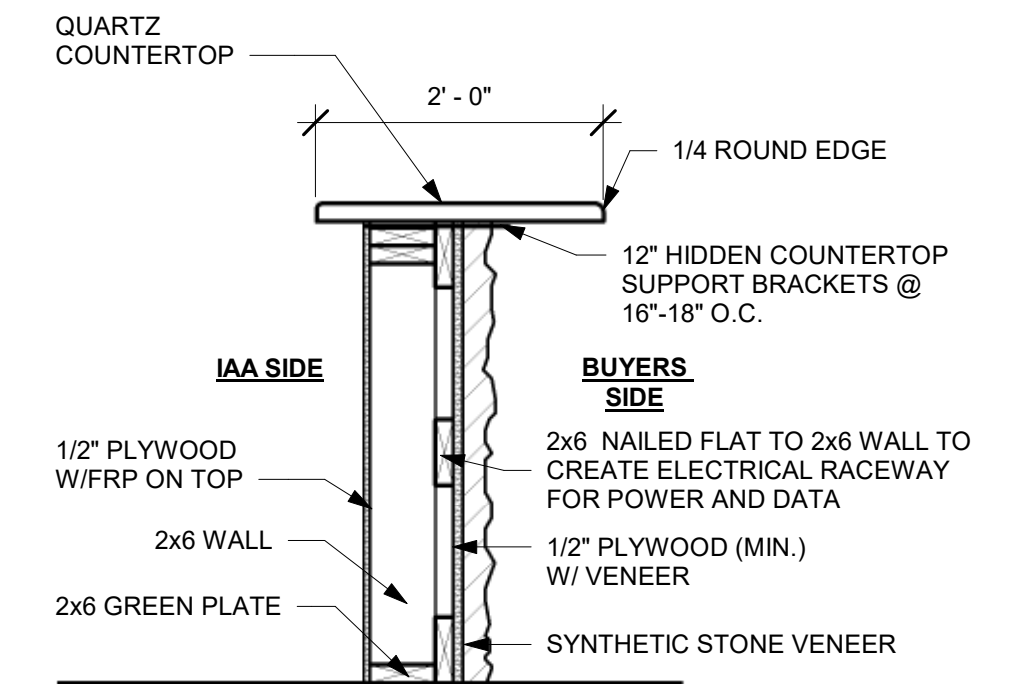


12 ACCESSIBLE WALL HUNG DETAIL
1" = 1'-0"

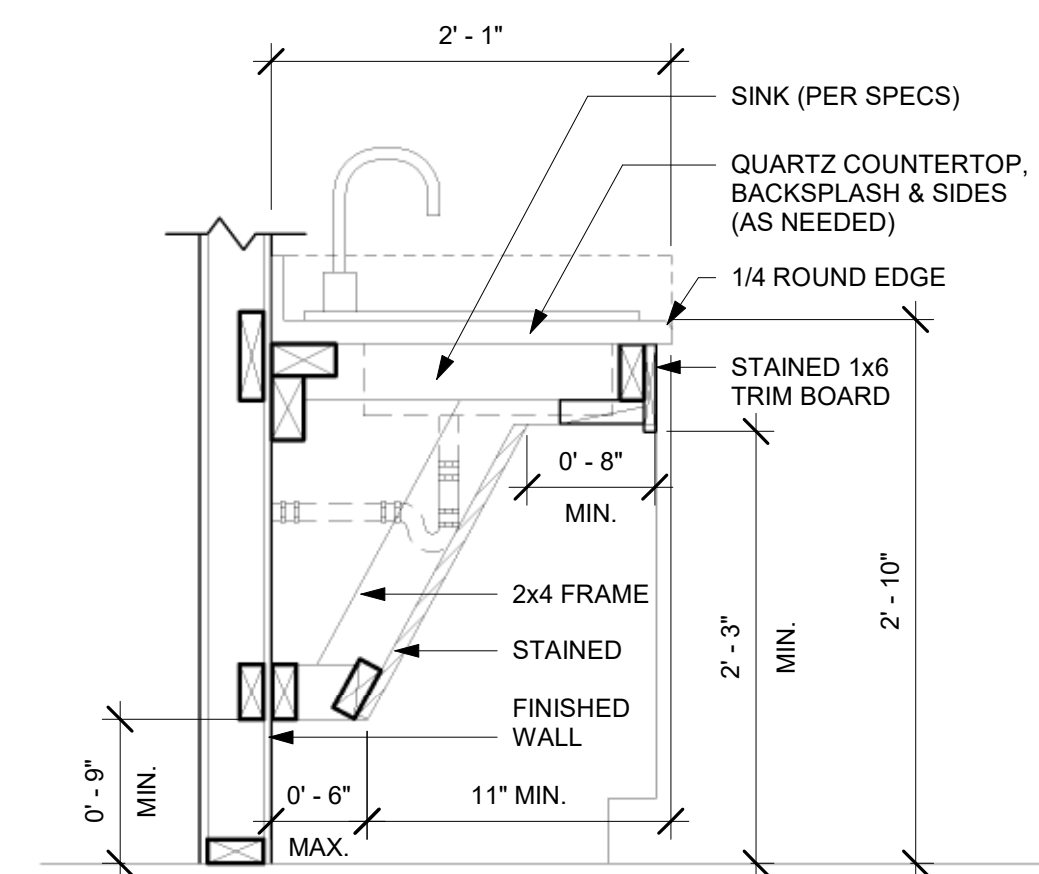


15 E.W.C. @ BUYERS LOBBY
3/8" = 1'-0"

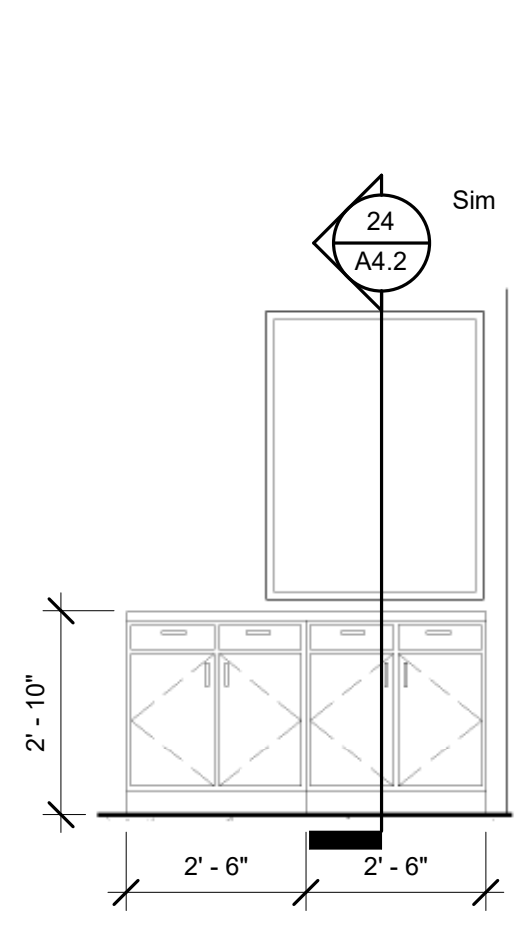
16 ELEV. @ BUYERS COUNTER
3/8" = 1'-0"



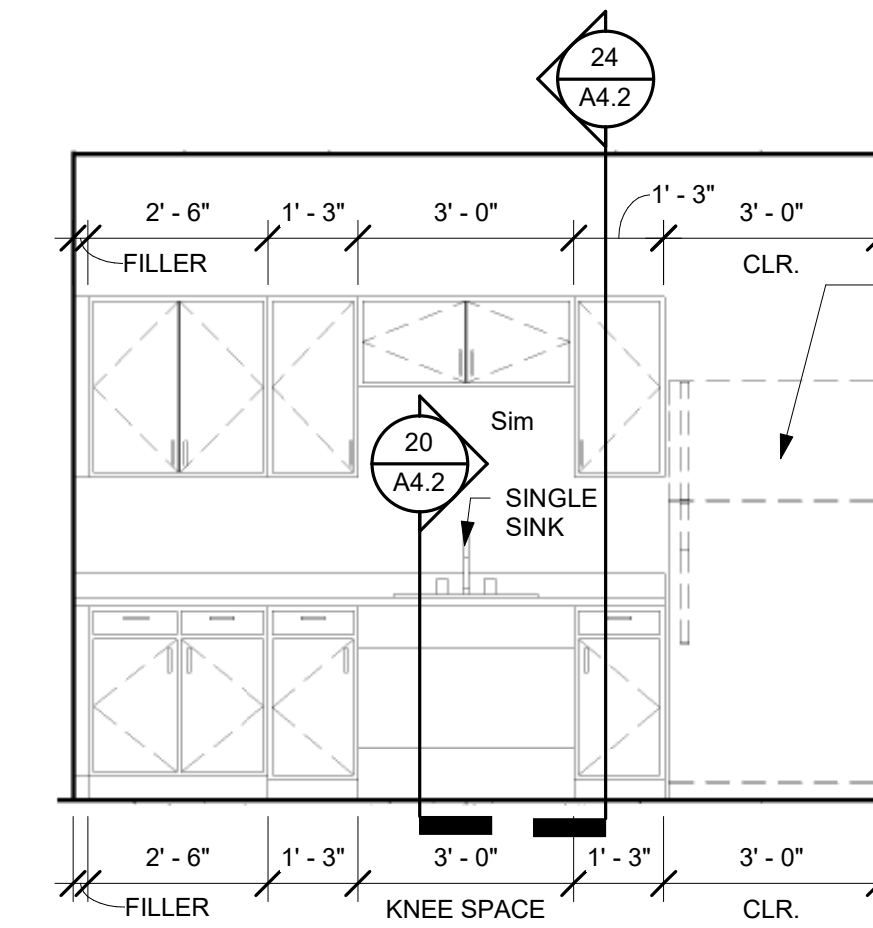
17 SECTION @ SALES COUNTER
3/4" = 1'-0"



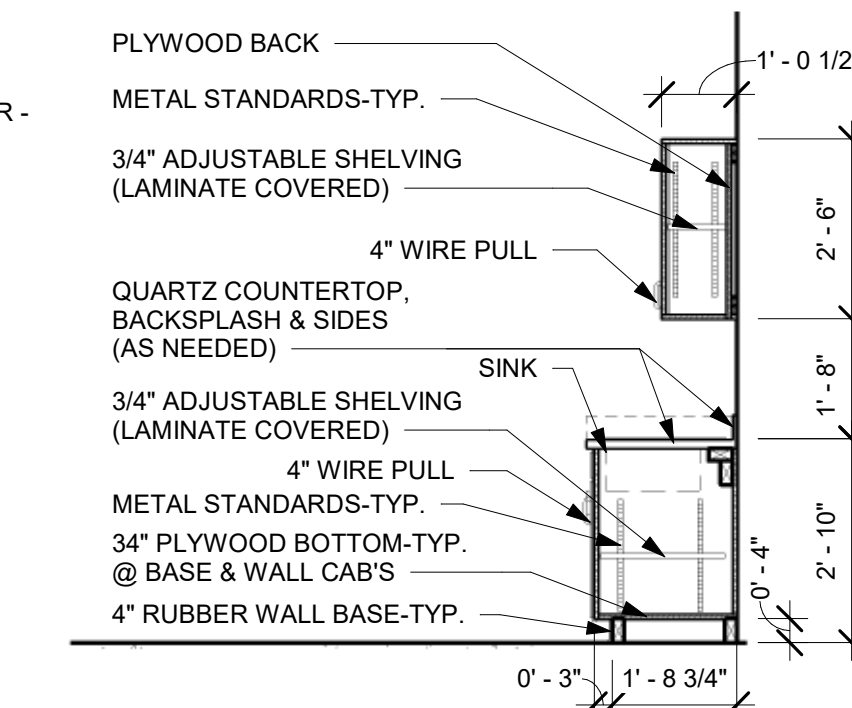
20 ACCESSIBLE MILLWORK DETAIL
1" = 1'-0"



22 COUNTER @ BUYERS LOBBY
3/8" = 1'-0"



23 ELEV. @ BREAK ROOM
3/8" = 1'-0"



24 TYP. MILLWORK SECTION
3/8" = 1'-0"

NOTE: UPPER / LOWER CABINETS AND ROD SHELVING TO BE COVERED WITH LAMINATE

#	DATE	COMMENTS

05/13/20
STATE OF SOUTH CAROLINA
KEVIN ALBERT
Fort Smith, AR
No. 10444
REGISTERED ARCHITECT

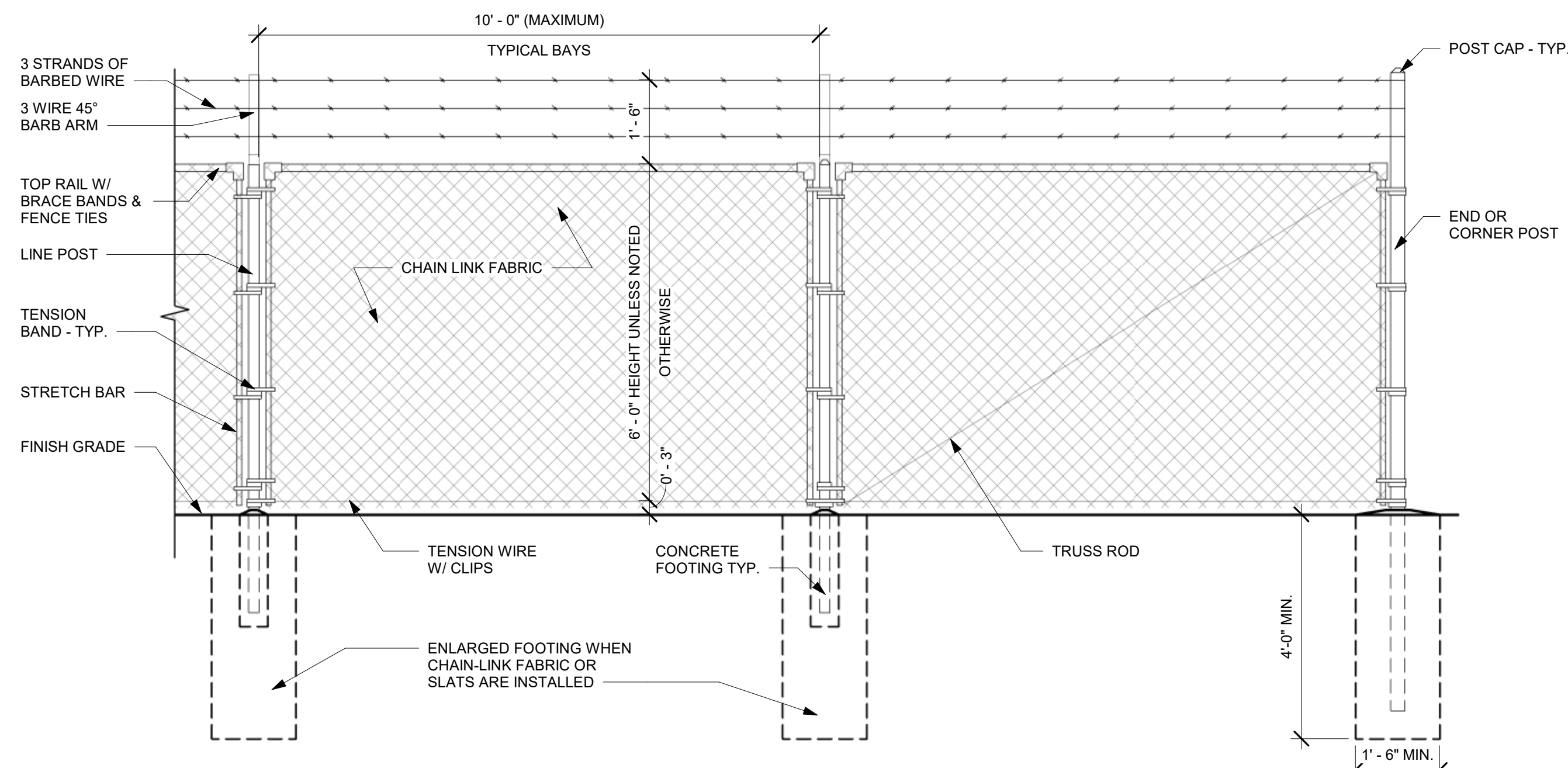
SECTIONS, ELEVATIONS & DETAILS

DATE: 05/13/2020 JOB NO. 2020-09

SHEET:

A4.2

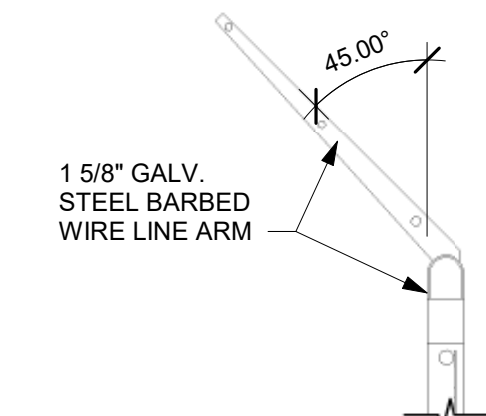
THE HILL FIRM
INC.
Fort Smith, AR
No. 101657
REGISTERED ARCHITECTS



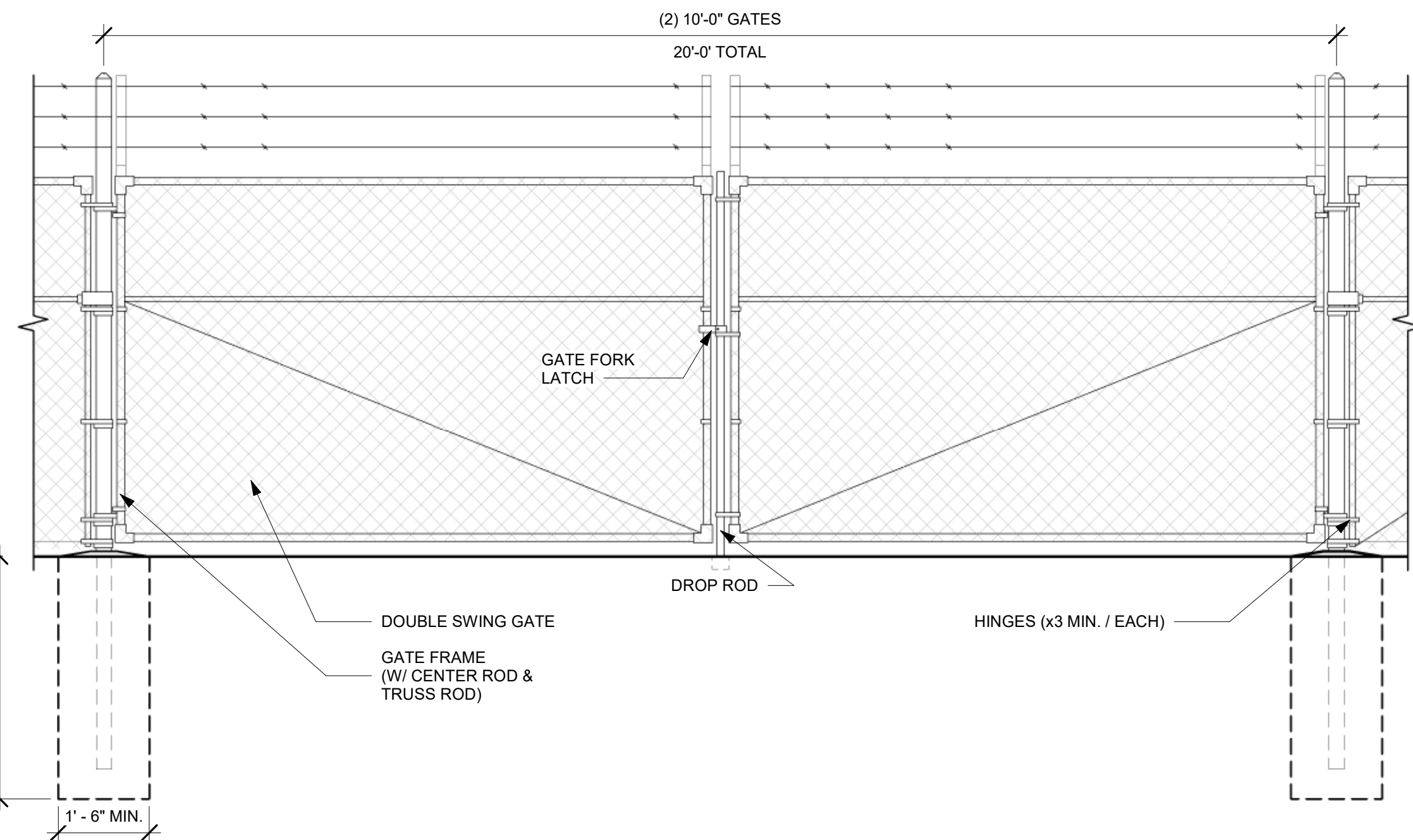
1 TYP. FENCE DETAIL
1/2" = 1'-0"

GENERAL NOTES:

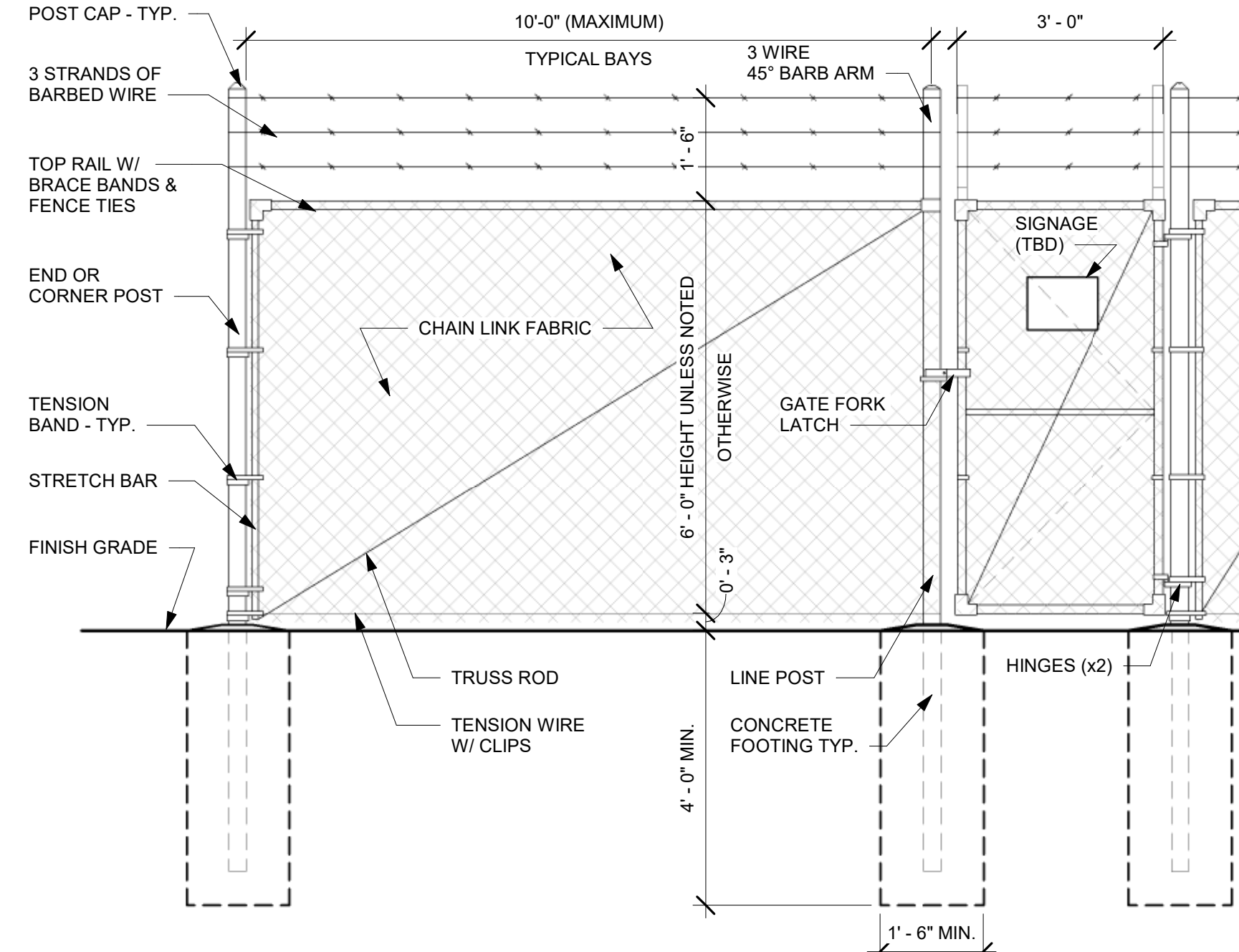
1. FOOTING WIDTH TO BE 4x POST DIAMETER (MIN.)
2. MIN. DEPTH TO BE 36" @ GATE, END & CORNER POST.
3. GATES MAY BE MANUAL OR ELECTRICALLY OPERATED (COORD. W/ OWNER)
4. HINGES SHOULD BE A MIN. OF 2 ON SMALLER "MAN" GATES AND A MIN. OF 3 ON LARGER SWING GATES.
- 5a. DRIVEN POSTS ARE NOT RECOMMENDED... UNLESS SOIL CONDITIONS CAN BE DETERMINED ADEQUATE.
- 5b. PRECAUTIONS MUST BE TAKEN ON DRIVEN POST NOT TO BEND POSTS MUST.
- 5c. DRIVEN POSTS SHOULD NOT BE USED AT TENSION POSTS, CORNERS, ENDS OR AT GATES.



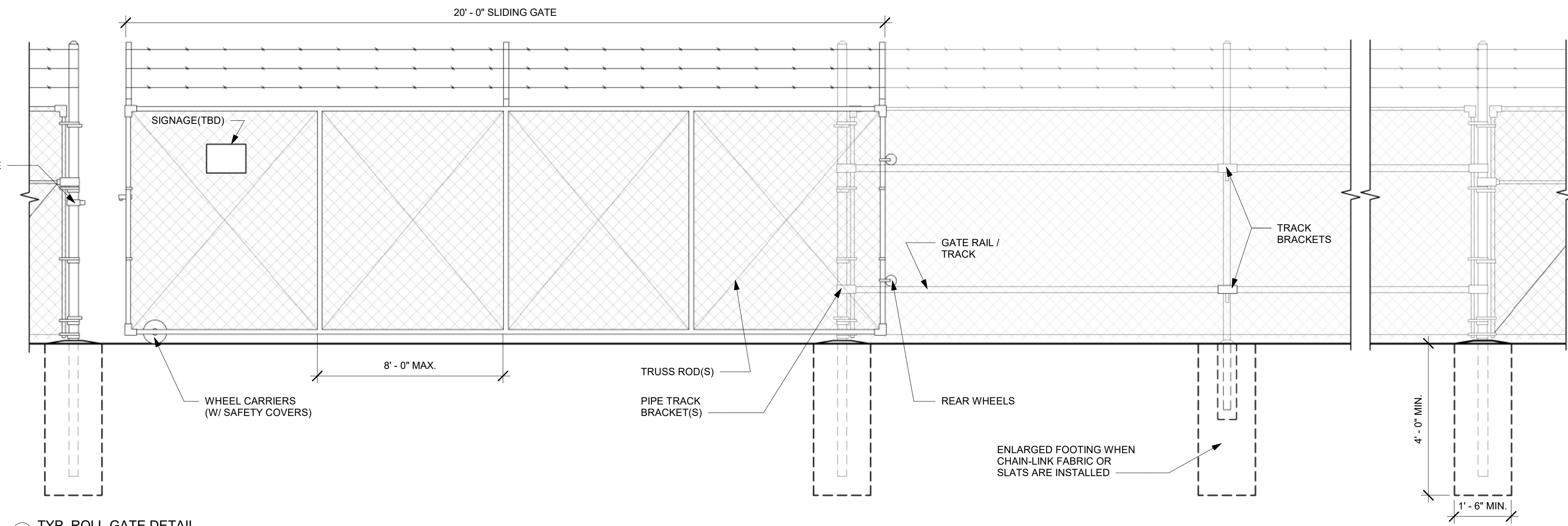
A TYP. 45° BARB ARM
1/2" = 1'-0"



2 LARGE SWING GATE DETAIL
1/2" = 1'-0"



3 TYP. FENCE DETAIL (W/ SMALL GATE)
1/2" = 1'-0"



4 TYP. ROLL-GATE DETAIL
1/2" = 1'-0"

32. FENCING GUIDELINES

32.1 GENERAL DESCRIPTION

THE PERIMETER AND INTERIOR STANDARD FENCING APPROACH FOR IAA GENERALLY CONSISTS OF CHAIN LINK FENCING AND SWING GATES, 6' IN HEIGHT, WITH 3 STRANDS OF BARBED WIRE ANGLED TOWARD THE EXTERIOR OF THE RAIL, A TOP RAIL, NO MID RAIL, AND TENSION WIRE ON BOTTOM OF THE FABRIC. IN ADDITION TO THIS GUIDELINE, LOCAL AND MUNICIPAL REGULATIONS AND STANDARDS SHALL BE IMPLEMENTED. SPECIFICALLY LOCAL ORDINANCES, REQUIREMENTS, OR ZONING SHOULD BE REVIEWED AND CONSIDERED. TYPICALLY THESE ADDITIONAL GOVERNMENTAL REQUIREMENTS, IF FOUND, WILL CHANGE THIS STANDARD IN THE FOLLOWING WAYS: 6' HEIGHT TO 8' HEIGHT, VINYL COVERED CHAIN LINK INSTEAD OF GALVANIZED SLATS OR SOLID PANEL FENCING INSTEAD OF STANDARD CHAIN LINK. IAA WILL CONSIDER ALL COST SAVINGS DUE TO A POSSIBLE DESIGN CHANGE IN THE FOLLOWING SPECIFICATION.

32.2 PURPOSE

TO PROVIDE THE CIVIL ENGINEER OF RECORD (EOR) GUIDANCE ON INSURANCE AUTO AUCTIONS' (IAA) FENCING EXPECTATIONS. THIS DOCUMENT IS INTENDED TO COMPLEMENT THE EOR'S ENGINEERING EXPERTISE AND LOCAL KNOWLEDGE TO PRODUCE THE MOST COST EFFECTIVE PAVEMENT DESIGN WHICH MEETS IAA'S MINIMUM CRITERIA SET BELOW.

32.3 PRODUCTS

- A. FABRIC FOR THE 2-INCH MESH SHALL BE 9-GAUGE, ZINC-COATED STEEL (ASTM A-392, CLASS 2.2.0 OUNCE PER SQUARE FOOT) HOT DIPPED GALVANIZED. TOP AND BOTTOM SELVAGE TO BE BARBED.
- B. BARBED WIRE SHALL BE 3 LINES OF 2 STRANDS TWISTED 12-1/2 GAUGE, ZINC-COATED WIRE WITH 4-POINT (14-GAUGE ROUND STEEL) BARBS AT 5-INCH INTERVALS COMPLYING WITH ASTM A-585, TYPE II, BARBED WIRE WITH CLASS II COATING. PROVIDE ADDITIONAL STRANDS OF BARBED WIRE WHERE REQUIRED TO MAINTAIN 4-INCH SPACING BETWEEN WIRES FOR TOP OF FENCE FABRIC.
- C. FENCE POSTS, RAILS AND BRACING ASSEMBLIES:
 - a. ALL TUBING AND BRACES SHALL BE GIVEN AN OUTSIDE DIAMETER CORROSION PROTECTION OF 1.0x:1 OUNCE OF ZINC PER SQUARE FOOT OF SURFACE.
 - b. LINE POSTS SHALL BE 2.0-INCH O.D. ROUND, SCHEDULE 40
 - c. END, CORNER, PULL AND GATE POSTS SHALL BE 4.0-INCH O.D. ROUND, SCHEDULE 40. THESE LOCATIONS SHALL ALSO INCLUDE TOP RAIL ASSEMBLY TO THE NEXT POST IN LINE.
 - d. TENSION WIRE SHALL BE METALLIC-COATED STEEL WIRE: 0.177" DIAMETER.
 - e. LINE POST CAPS FOR 4-INCH AND 2-INCH FENCE POSTS SHALL INCORPORATE AN EXTENSION ARM FOR 3 STRANDS OF BARBED WIRE SET AT 45 DEGREES. ARMS SHALL BE OF SAME MATERIAL AS END RAILS AND OTHER ACCESSORIES.
 - f. ACCESSORIES: PROVIDE ALL POST TOPS, CLIPS, TIES, BANDS, STRETCHER BARS AND MISCELLANEOUS FASTENERS FOR THE COMPLETE INSTALLATION.
 - a. STRETCHER BARS SHALL BE 3/16-INCH BARS OF LENGTH 1-INCH LESS THAN FABRIC HEIGHT. PROVIDE ONE STRETCHED BAR FOR EACH GATE AND TERMINAL POST AND TWO FOR EACH CORNER AND PULL POST. PROVIDE TWO STRETCHER BARS FOR EACH GATE FRAME.
 - b. STRETCHER BAR BANDS SHALL BE HEAVY STEEL FOR SECURING STRETCHER BARS TO POSTS.
 - c. FABRIC TIES SHALL BE 6-GAUGE ALUMINUM OR 9-GAUGE STEEL, WRAPPED TWICE. ALL FITTINGS AND ACCESSORIES SHALL BE COATED IN ACCORDANCE WITH ASTM A153.
 - g. CONCRETE FOR PLACING FENCE POSTS SHALL BE 3,000 PSI OR BETTER AT A MINIMUM DEPTH OF 40", WITH PROPER REVIEW AND IAA APPROVAL IF CONCRETE IS TO BE PLACED NEAR OR OUT OF MANUFACTURER'S RECOMMENDED CONSTRAINTS.
- H. PEDESTRIAN SINGLE AND DOUBLE SWING GATES
 - a. FABRICATE PERIMETER FRAMES OF GATES FROM SAME MATERIAL AND FINISH AS FENCE FRAMEWORK. ASSEMBLE GATE FRAMES BY WELDING. WELD AREAS REPAIRED WITH ZINC-RICH COATING APPLIED PER MANUFACTURER'S DIRECTIONS. FABRIC TO MATCH FENCE. PROVIDE HORIZONTAL AND VERTICAL MEMBERS TO ENSURE PROPER GATE OPERATION AND ATTACHMENT OF FABRIC, HARDWARE, AND ACCESSORIES.
 - b. FABRIC: SAME AS FOR FENCE UNLESS OTHERWISE INDICATED. SECURE FABRIC AT VERTICAL EDGES WITH TENSION BARS AND BANDS AND TO TOP AND BOTTOM OF FRAME WITH TIE WIRES.
 - c. STORAGE: STORE GATE FRAMES ON BUILDING SITE, IN AN UPRIGHT POSITION, UNDER COVER, ON WOOD SILLS OR FLOORS, AND IN A MANNER THAT PREVENTS RUST OR DAMAGE. VENTILATE CANVAS OR PLASTIC COVERS TO PREVENT MOISTURE TRAPS.
 - d. DIMENSIONS: GATE OPENING HEIGHTS AND WIDTHS SHALL BE AS SHOWN ON THE DETAIL DRAWINGS.
- I. VEHICULAR DOUBLE SWING GATES
 - a. FABRICATE PERIMETER FRAMES OF GATES FROM SAME MATERIAL AND FINISH AS FENCE FRAMEWORK. ASSEMBLE GATE FRAMES BY WELDING. WELD AREAS REPAIRED WITH ZINC-RICH COATING APPLIED PER MANUFACTURER'S DIRECTIONS. FABRIC TO MATCH FENCE. PROVIDE HORIZONTAL AND VERTICAL MEMBERS TO ENSURE PROPER GATE OPERATION AND ATTACHMENT OF FABRIC, HARDWARE, AND ACCESSORIES.
 - b. FABRIC: SAME AS FOR FENCE UNLESS OTHERWISE INDICATED. SECURE FABRIC AT VERTICAL EDGES WITH TENSION BARS AND BANDS AND TO TOP AND BOTTOM OF FRAME WITH TIE WIRES.
 - c. STORAGE: STORE GATE FRAMES ON BUILDING SITE, IN AN UPRIGHT POSITION, UNDER COVER, ON WOOD SILLS OR FLOORS, AND IN A MANNER THAT PREVENTS RUST OR DAMAGE. VENTILATE CANVAS OR PLASTIC COVERS TO PREVENT MOISTURE TRAPS.
 - d. DIMENSIONS: MINIMUM TWO 10' GATES FOR A TOTAL OF 20' WIDE

32.4 DIRECTIONS TO CONTRACTOR

- A. CHAIN LINK FENCING INSTALLATION
 - a. GENERAL: INSTALL FENCE TO COMPLY WITH ASTM F 567. DO NOT BEGIN INSTALLATION AND DIRECTION BEFORE FINAL GRADING IS COMPLETED, UNLESS OTHERWISE PERMITTED. COORDINATE FENCE POST LOCATIONS WITH OTHER TRADES PRIOR TO INSTALLATION.
 - b. STAKE LOCATIONS OF FENCE LINES, GATES, AND TERMINAL POSTS. DO NOT EXCEED INTERVALS OF 500 FEET OR LINE OF SIGHT BETWEEN STAKES. INDICATE LOCATIONS OF UTILITIES, LAWN SPRINKLER SYSTEM, UNDERGROUND STRUCTURES, BENCHMARKS, AND PROPERTY MONUMENTS. EXCAVATION: DRILL OR HAND-EXCAVATE (USING POST-HOLE DIGGER) HOLES FOR POSTS TO DIAMETERS AND SPACINGS INDICATED, IN FIRM, UNDISTURBED OR COMPACTED SOIL.
 - i. IF NOT INDICATED ON DRAWINGS, EXCAVATE HOLES FOR EACH POST TO MINIMUM DIAMETER RECOMMENDED BY FENCE MANUFACTURER, BUT NOT LESS THAN FOUR TIMES THE LARGEST CROSS SECTION OF POST.
 - ii. UNLESS OTHERWISE INDICATED, EXCAVATE HOLE DEPTHS APPROXIMATELY 4" LOWER THAN POST BOTTOM, WITH BOTTOM OF POSTS SET NOT LESS THAN 36" BELOW FINISH GRADE SURFACE.
 - d. SETTING POSTS: CENTER AND ALIGN POSTS IN HOLES 4" ABOVE BOTTOM OF EXCAVATION, UNLESS OTHERWISE INDICATED. SPACE A MAXIMUM OF 10' O.C., UNLESS OTHERWISE INDICATED.
 - i. PROTECT PORTION OF POSTS ABOVE GROUND FROM CONCRETE SPATTER. PLACE CONCRETE AROUND POSTS AND VIBRATE OR TAMP FOR CONSOLIDATION. CHECK EACH POST FOR VERTICAL AND TOP ALIGNMENT, AND HOLD IN POSITION DURING PLACEMENT AND FINISHING OPERATIONS.
 1. UNLESS OTHERWISE INDICATED, EXTEND CONCRETE FOOTINGS 1" ABOVE GRADE AND TROWEL TO A CROWN TO SHED WATER.
 - e. INSTALL PIPE POST BRACE AT TERMINAL, CORNER, PULL AND GATE POSTS AND EXTENDING TO ADJACENT LINE POST WITH DIAGONAL TRUSS ROD.
 - i. TERMINAL POSTS: INSTALL AT CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENT OF 15 DEGREES OR MORE, AT ANY ABRUPT CHANGE IN GRADE, AND AT INTERVALS NOT GREATER THAN 500 FEET. FOR RUNS EXCEEDING 500 FEET, SPACE PULL POSTS AN EQUAL DISTANCE BETWEEN CORNER OR END POSTS.
 - f. BRACE ASSEMBLIES: INSTALL BRACES AT END AND GATE POSTS AND AT BOTH SIDES OF CORNER AND PULL POSTS. LOCATE HORIZONTAL BRACES AT MIDHEIGHT OF FABRIC ON FENCES WITH TOP RAIL AND AT TWO THIRDS FABRIC HEIGHT ON FENCES WITHOUT TOP RAIL. INSTALL SO POSTS ARE PLUMB WHEN DIAGONAL ROD IS UNDER PROPER TENSION.
 - g. BARBED WIRE ARMS: BOLT OR RIVET TO TOP OF POST. ANGLE SINGLE ARMS TOWARD APPROACH SIDE OF FENCE.
 - h. FABRIC: LEAVE APPROXIMATELY 2" BETWEEN FINISH GRADE AND BOTTOM SELVAGE UNLESS OTHERWISE INDICATED. PULL FABRIC TAUT AND TIE TO POSTS, RAILS, AND TENSION WIRES. INSTALL FABRIC ON SECURITY SIDE OF FENCE, AND ANCHOR TO FRAMEWORK SO THAT FABRIC REMAINS UNDER TENSION AFTER PULLING FORCE IS RELEASED.
 - i. TENSION OR STRETCHER BARS: THREAD THROUGH FABRIC AND SECURE TO END, CORNER, PULL AND GATE POSTS WITH TENSION BANDS SPACED NOT OVER 24" O.C. FASTEN FABRIC TO TENSION WIRE WITH HOG RINGS OF SAME MATERIAL AND FINISH AS FABRIC WIRE.
 1. EXTENDED ALONG TOP AND BOTTOM OF FENCE FABRIC. INSTALL TOP TENSION WIRE THROUGH POST CAP LOOPS. INSTALL BOTTOM TENSION WIRE WITHIN 6 INCHES OF BOTTOM OF FABRIC AND TIE TO EACH POST WITH NOT LESS THAN SAME DIAMETER AND TYPE OF WIRE.
 - k. MAXIMUM SPACING: TIE FABRIC TO LINE POSTS 12" O.C. AND TO RAILS AND BRACES 24" O.C.
 - l. FASTENERS: INSTALL NUTS FOR TENSION BANDS AND CARRIAGE BOLTS ON THE SIDE OF THE FENCE OPPOSITE THE FABRIC SIDE. PEEN ENDS OF BOLTS OR SCORE THREADS TO PREVENT REMOVAL OF NUTS FOR ADDED SECURITY.
- B. GATE INSTALLATION
 - a. INSTALL GATES PLUMB, LEVEL, AND SECURE FOR FULL OPENING WITHOUT INTERFERENCE. INSTALL GROUND-SET ITEMS IN CONCRETE FOR ANCHORAGE. ADJUST HARDWARE FOR SMOOTH OPERATION AND LUBRICATE WHERE NECESSARY. INSTALL GATES ACCORDING TO MANUFACTURER'S INSTRUCTIONS, PLUMB, LEVEL, AND SECURE.
- C. FIFTEEN FEET CONSTRUCTION ACCESS OPENINGS IN PERIMETER FENCE MAY BE USED AT THE CONTRACTOR'S DISCRETION. NUMBER AND LOCATION SHALL BE APPROVED, IN WRITING, BY THE ARCHITECT/ENGINEER. FINAL INSTALLATION OF PORTIONS OF THE FENCING SHALL BE DONE WHEN CONSTRUCTION OF ALL INTERIOR WORK IS SUBSTANTIALLY COMPLETE.
- D. CLEAN UP AND ADJUSTING
 - a. UPON COMPLETION OF THE WORK, INSPECT THE ENTIRE INSTALLATION. CORRECT ALL DEFECTIVE WORK. REPLACE ALL DAMAGED AND DEFECTIVE PARTS WITH NEW MATERIALS.
 - b. GATES: AFTER REPEATED OPERATION OF COMPLETED INSTALLATION EQUIVALENT TO 3 DAYS' USE BY NORMAL TRAFFIC, READJUST GATES FOR OPTIMUM OPERATING CONDITION AND SAFETY. LUBRICATE OPERATING EQUIPMENT AND CLEAN EXPOSED SURFACES.

COMMENTS	DATE	#

System No. W-L-3170
F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 1/4 and 1 Hr (See Item 3A)

1. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
B. Gypsum Board — Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 6 in. **The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.**

2. Steel Sleeve — Cylindrical sleeve fabricated from 0.0125 in. thick (30 gauge) galv sheet steel and having a min 2 in. lap along the longitudinal seam. Length of the sleeve to be equal to or max 2 in. greater than the thickness of the wall. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the opening and releasing the coil to let it uncoil against the circular cutouts in the gypsum wallboard layers. The ends of the steel sleeve shall be flush with or extend a max 1 in. beyond each surface of the wall.

As an alternate, steel sleeve may consist of nom 6 in. diam (or smaller) Schedule 5 (or heavier) steel pipe sleeve friction-fitted into circular cutouts in the gypsum board layers. The ends of the steel sleeve shall be flush with or extend a max 1 in. beyond each surface of the wall.

3. Cables — Max 4-1/2 in. diam tight bundle of cables to be installed eccentrically or concentrically within the opening. The annular space between the cables and the periphery of the opening shall be min 0 in. (point contact) to max 1-1/2 in. Cable bundle to be rigidly supported on both sides of the wall assembly. The following types and sizes of cables may be used:
A. Max 200 pair No. 24 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacketing material.
B. Max 1/C No. 350 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.
C. Max 7/C No. 12 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation with XLPE or PVC jacket.
D. Max 3/C No. 2/0 AWG (or smaller) copper or aluminum conductor SER cables with PVC insulation and jacket.
E. Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TEK cable.
F. Max 110/125 fiber optic (F.O.) cable with PVC insulation and jacket.
G. Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable (Romex) with PVC insulation and jacket.
H. Max RG/U coaxial cable with fluorinated ethylene insulation and jacket.
I. Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with Hylar jacket and insulation.

3A. Through Penetrating Product* — As an alternate to the cables (Item 3), max 4-1/2 in. diam tight bundle of max 4/C No. 2/0 AWG (or smaller) aluminum or steel **Armored Cable+ or Metal Clad Cable+** installed within the opening. Annular space between through-penetrating products and periphery of opening to be min 0 in. (point contact) to max 1-1/2 in. Through penetrating product rigidly supported on both sides of wall assembly. When Armored Cable or Metal Clad Cable is used, **T Rating is 1/4 hr.**

AFC CABLE SYSTEMS INC

4. Firestop System — The firestop system shall consist of the following:
A. Packing Material — Min 1 in. thickness of 4 pf mineral wool batt insulation compressed and tightly packed into each end of sleeve. Recess packing material as required to accommodate fill material (Item 4B).
B. Fill, Void or Cavity Material — Sealant — Min 1/2 in. thickness of fill material applied within annulus, flush with each end of steel sleeve. At point contact location, min 1/4 in. diam bead of fill material applied at cable bundle/steel sleeve interface on both sides of wall.
SPECIFIED TECHNOLOGIES INC — SpecSeal LCI Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

4 BUNDLE OF ELECTRICAL CABLES WALL PENETRATION DETAIL

System No. W-L-3171
F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 1/4 and 3/4 Hr (See Item 2A)

1. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
B. Gypsum Board — Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 1 in. larger than OD of cable (Item 2).
The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. Cable — One cable to be installed eccentrically or concentrically within the opening. The annular space between the cable and the periphery of the opening shall be min 0 in. (point contact) to max 1 in. Cable to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of cable may be used:
A. Max 200 pair No. 24 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacketing material.
B. Max 1/C No. 350 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.
C. Max 7/C No. 12 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation with XLPE or PVC jacket.
D. Max 3/C No. 2/0 AWG (or smaller) copper or aluminum conductor SER cables with PVC insulation and jacket.
E. Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TEK cable.
F. Max 110/125 fiber optic (F.O.) cable with PVC insulation and jacket.
G. Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable (Romex) with PVC insulation and jacket.
H. Max RG/U coaxial cable with fluorinated ethylene insulation and jacket.
I. Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with Hylar jacket and insulation.

2A. Through Penetrating Product* — As an alternate to the cable (Item 2), one max 4/C No. 2/0 AWG (or smaller) aluminum or steel Armored Cable+ or Metal Clad Cable+ installed within the opening. Annular space between through-penetrating product and periphery of opening to be min 0 in. (point contact) to max 1 in. Through penetrating product rigidly supported on both sides of wall assembly. **When Armored Cable or Metal Clad Cable is used, T Rating is 1/4 hr.**

AFC CABLE SYSTEMS INC

3. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. diam bead of fill material applied at cable/gypsum board interface on both surfaces of wall. **SPECIFIED TECHNOLOGIES INC — SpecSeal LCI Sealant**

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

5 ELECTRICAL CABLE WALL PENETRATION DETAIL

System No. W-L-7061
F Ratings — 1 and 2 Hr (See Item 1)
T Rating — 3/4 Hr

1. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.
B. Gypsum Board — Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 2 in. (51 mm) larger than OD of steel duct (Item 2). The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. Steel Duct — Nom 8 in. (203 mm) diam (or smaller) No. 28 gauge (or heavier) or nom 4 in. (102 mm) diam (or smaller) No. 30 gauge (or heavier) spiral wound or long seam galv steel duct. Annular space between duct and periphery of opening to be min 0 in. (0 mm, point contact) to max 2 in. (51 mm). Duct to be rigidly supported on both sides of the wall assembly.

3. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. (6 mm) diam bead of fill material applied at steel duct/gypsum board interface on both surfaces of wall. **SPECIFIED TECHNOLOGIES INC — SpecSeal LCI Sealant**


* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

6 STEEL DUCT WALL PENETRATION

#	DATE	COMMENTS

Insurance Auto Auction, Inc.
 430 Two Notch Rd.
 Lexington, South Carolina 29073
PERMIT - CONSTRUCTION DOCUMENTS

05/13/20



TYPICAL PENETRATION DETAILS

DATE: 05/13/2020 JOB NO. 2020-09

SHEET: **A5.1**



ORIGINAL SHEET SIZE 36 x 24 / DO NOT SCALE DRAWING

CONSTRUCTION SAFETY GENERAL NOTE
THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS, SINCE THESE ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

Concrete General Notes

- 3100.1.** All detailing, fabrication and placing of reinforcing steel shall conform to the ACI Standard "Details and Detailing of Concrete Reinforcement" (ACI 318).
- 3100.2.** All concrete for building & VIC foundations shall develop a 28-day minimum compressive strength of 3,000 psi & have a 5" maximum slump. All concrete for slabs shall develop a 28-day minimum compressive strength of 3,500 psi & have a 5" maximum slump. See Arch. and specifications for mix design requirements.
- 3100.3.** All reinforcing steel shall be deformed bars conforming to ASTM A615, Grade 60.
- 3100.4.** Reinforcing bar splices shall be 44 bar diameters for #6 and smaller diameter bars. Splices for #7 and larger diameter bars shall be 48 bar diameters.
- 3100.5.** All reinforcing bar hooks shall be ACI standard 90 degree hook, unless noted otherwise.
- 3100.6.** Provide corner bars in footings & turn-down slab same size & spacing as longitudinal reinforcing.
- 3100.7.** Provide (1) #4 hoop with 6" lap in slab around floor drains and slab penetrations greater than 3" in diameter. Also install around electrical conduit groupings 3" in diameter or greater. **CONDUIT SHALL NOT BE RUN UNDERNEATH COLUMN FOOTINGS OR SPREAD FOOTINGS.**
- 3100.8.** Welded wire fabric shall conform to ASTM A1064. Provide mesh in flat sheets.
- 3100.9.** Wire fabric reinforcing shall lap 6" and be securely wired at each side and end.
- 3100.10.** Bar supports at footings & slab-on-grade shall be factory made wire bar supports. Bearing plates may be required under bar supports to maintain reinf. position during concrete placement.
- 3100.11.** Smooth dowels shall be steel conforming to ASTM A36.
- 3100.12.** All slots, sleeves and other embedded items shall be set before concrete is placed. See architectural, electrical, mechanical, and vendor's drawings for size & locations.
- 3100.13.** The top of all concrete pedestals shall be square, level, and smooth to support the metal building base plates.
- 3100.14.** Plate dowel system shall be Diamond Dowel System by PNA Construction Technologies, the Spread Plate System by Greenstreak Group, Inc., or approved equal. Install plate dowels at slab construction joints @ 18" o.c.
- 3100.15.** Provide two #4 x 4'-0" long diagonal bars in top face at all re-entrant corners in slab and at any other locations denoted on the plans.
- 3100.16.** No site-specific geotechnical report including foundation recommendations was available at the time of original issue. In accordance with Section 1806.2 of the 2018 International Building Code a presumed maximum allowable bearing pressure for shallow foundations of 1,500 psf has been utilized. Presumed bearing material per Table 1806.2 are clay, sandy clay, silty clay, clayey silt, silt and sandy silt (DL, ML, MH, and CH). Foundations may also bear on engineered fill of type and placement method approved by a registered Geotechnical Engineer licensed in the state of South Carolina. Slab-on-grade design considers a minimum modulus of subgrade reaction (K-value) of 100 psi/in. will be provided.
- 3100.17.** Use of compacted free-draining pea gravel, crushed stone, or coarse sand having no more than 50% passing the No. 50 sieve and no more than 5% passing the No. 200 sieve is recommended by TSM, Inc. Consult geotechnical Engineer regarding potential substitution of these materials with approved subgrade. Slabs-on-ground have been designed for a modulus of subgrade reaction (k-value) of 100 psi/in.

NOTE: EXPANSIVE CLAYS, LOW-STRENGTH SOILS, SOFT SOILS AND SOILS WITH ORGANIC MATERIAL ARE NOT SUITABLE FOR SUPPORTING THE SLAB AND FOUNDATIONS. IF CONTRACTOR DISCOVERS UNSTABLE MATERIAL DURING EARTHWORK, A GEOTECHNICAL ENGINEER SHALL BE CONSULTED TO ARRIVE AT SOLUTION WHICH WILL NOT COMPROMISE THE STRUCTURAL INTEGRITY OF THE SLAB AND FOUNDATIONS.

TYPICAL STRUCTURAL ABBREVIATIONS

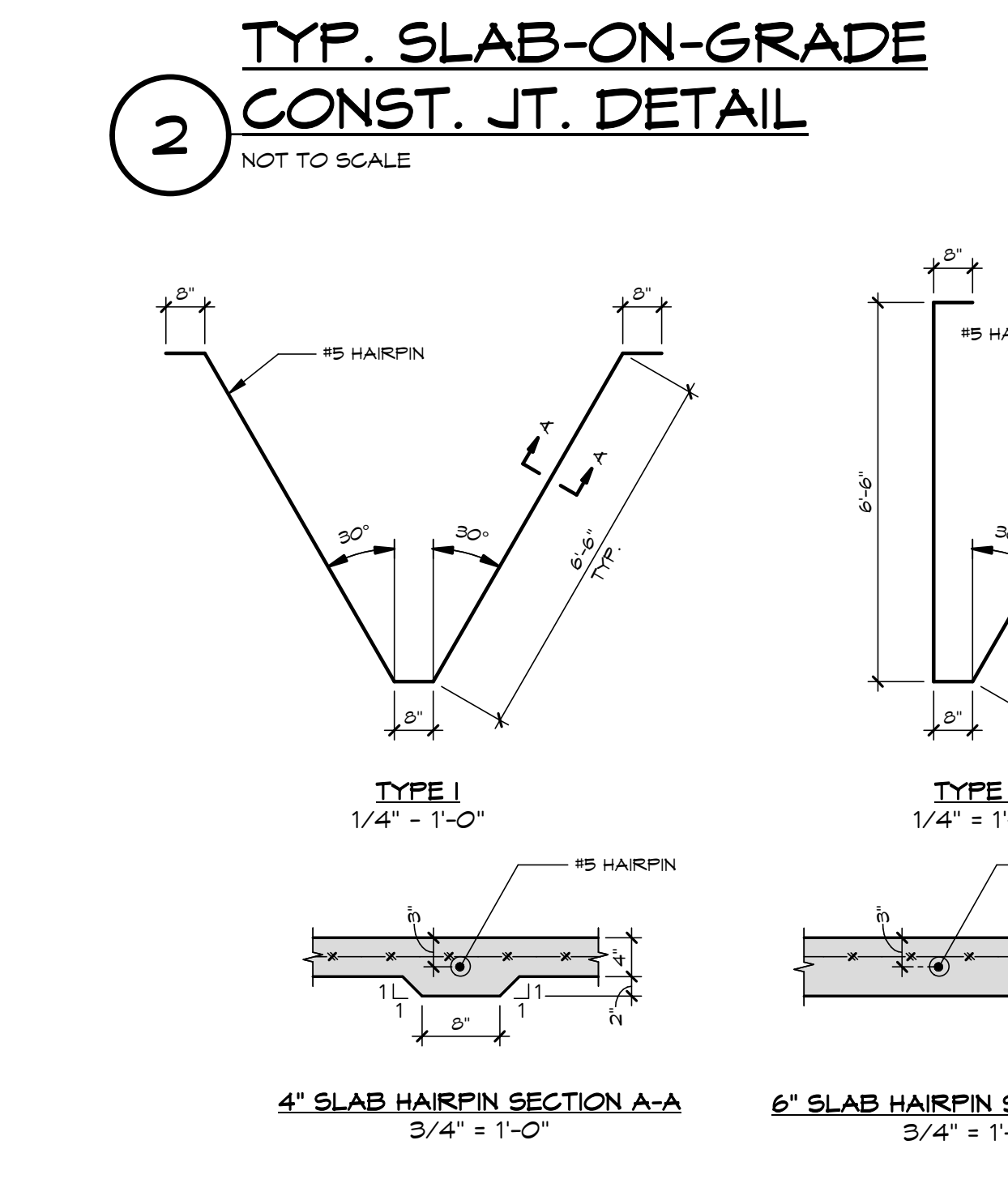
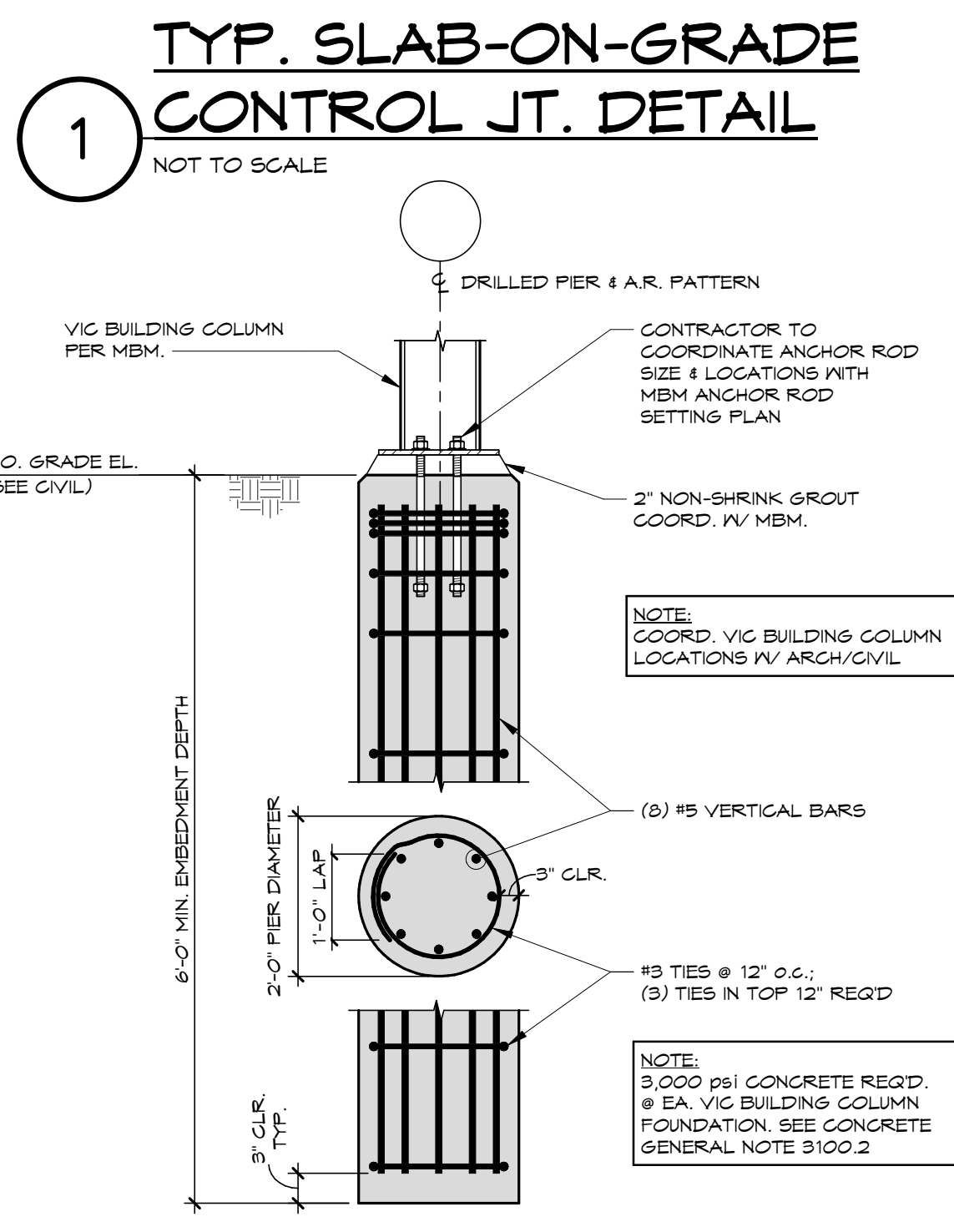
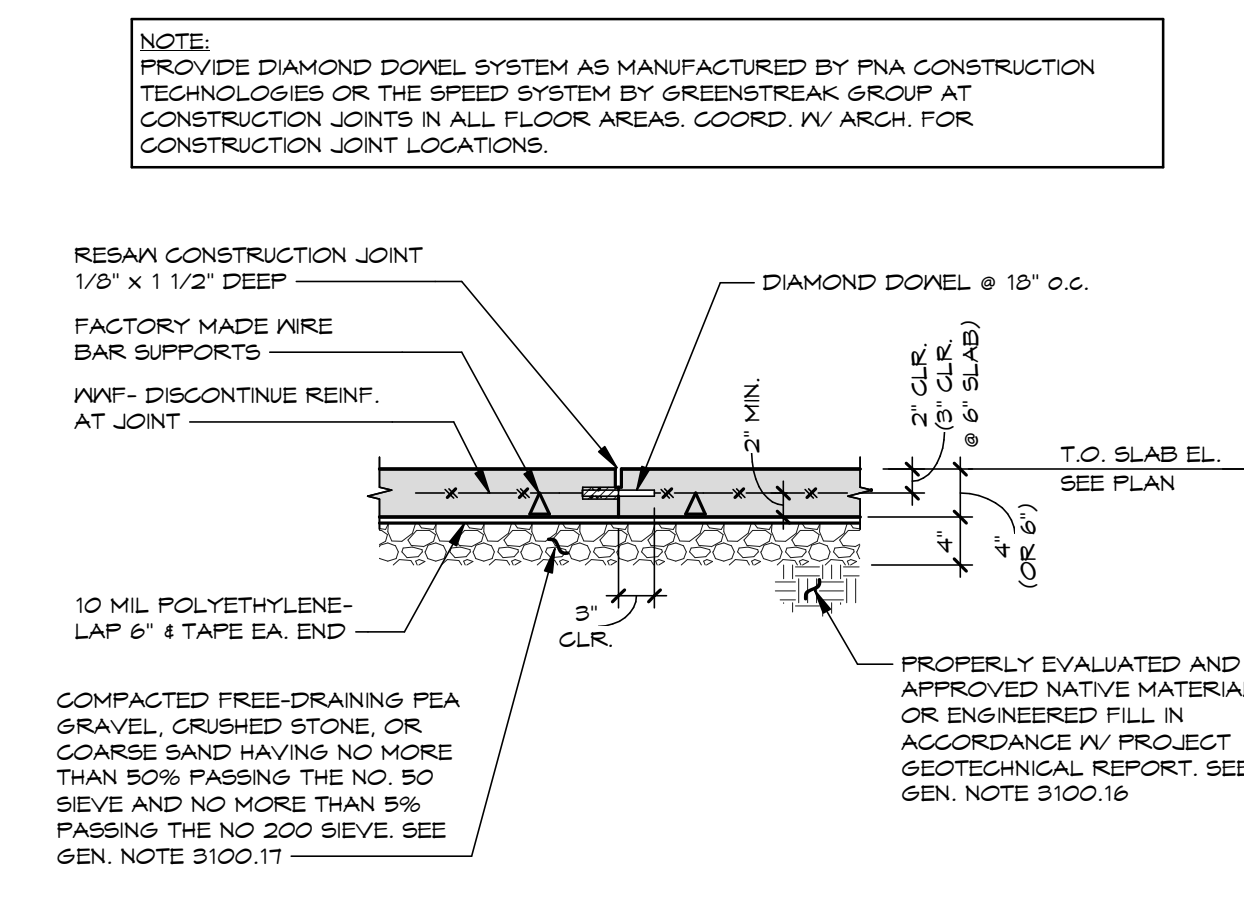
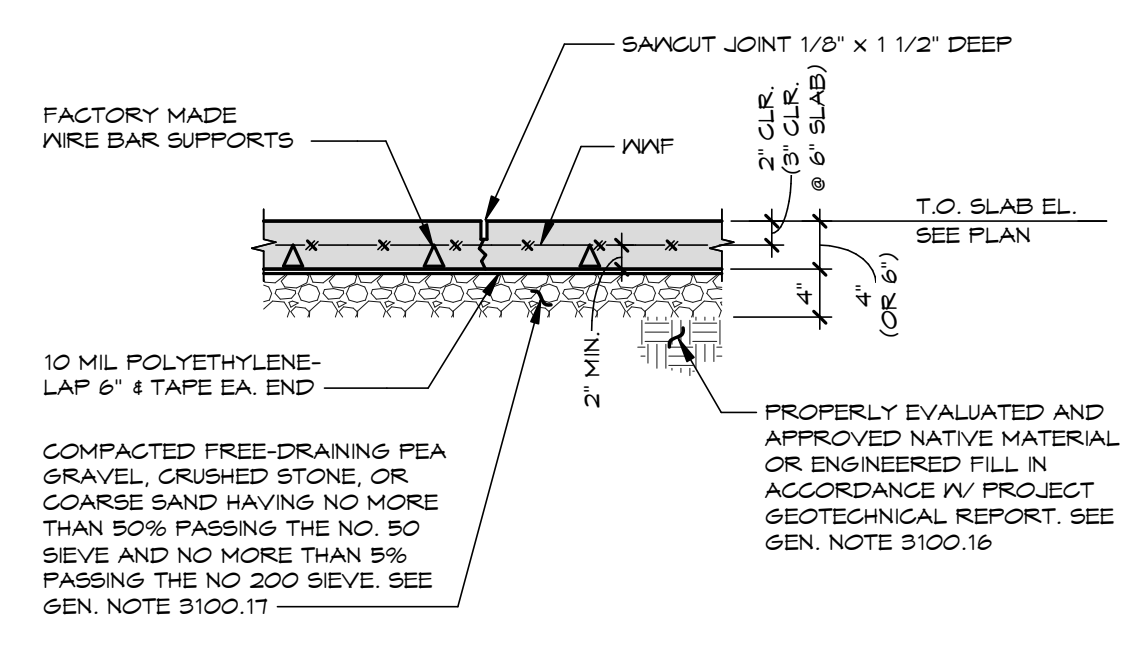
A.R.	ANCHOR ROD	FIN	FINISH	PSF	POUNDS PER SQUARE FOOT
ACI	AMERICAN CONCRETE INSTITUTE	FLR	FLOOR	PSI	POUNDS PER SQUARE INCH
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	FTS	FOOTING	R	RADIUS
ARCH	ARCHITECT	GA	GAUGE	REINF	REINFORCEMENT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	GALV	GALVANIZED	REQD	REQUIRED
BLDG	BUILDING	H.S.A	HEADED STUD ANCHOR	RTU	ROOF TOP UNIT
BM	BEAM	HK	HOOK	S.O.G.	SLAB ON GRADE
BOIT	BOTTOM	HORIZ	HORIZONTAL	SCHED	SCHEDULE
BRS	BEARINGS	J.B.E.	JOIST BEARING ELEVATION	SECT	SECTION
CLR	CLEAR	JST	JOIST	SECR	STRUCTURAL ENGINEER OF RECORD
COL	COLUMN	JT	JOINT	SIM	SIMILAR
CONC	CONCRETE	L	ANGLE	SJ	STEEL JOIST INSTITUTE
CONN	CONNECTION	LG	LONG	SPAC	SPACINGS
CONT	CONTINUOUS	LLV	LONG LES VERTICAL	SPECS	SPECIFICATIONS
DIA. or Ø	DIAMETER	LONG	LONGITUDINAL	STD	STANDARD
DN	DOWN	MAX	MAXIMUM	STIFF	STIFFENER
DM	DOWN	MBM	METAL BUILDING MANUFACTURER	STL	STEEL
DTL	DETAIL	MFG	MANUFACTURER	TOC	TOP OF CONCRETE
DWS	DRAWING	MN	MINIMUM	TOP	TOP OF FOOTING
E.F.	EACH FACE	MFR	MANUFACTURER	TOS	TOP OF STEEL
E.A.	EACH WAY	MIN	MINIMUM	TON	TOP OF WALL
EL	ELEVATION	MIS	MISCELLANEOUS	TRANS	TRANSVERSE
EQ	EQUAL	MTL	METAL	TYP	TYPICAL
EXIST	EXISTING	N.S.	NEAR SIDE	U.N.O.	UNLESS NOTED OTHERWISE
EXP	EXPANSION	O.C.	ON CENTER	VERT	VERTICAL
F.S.	FAR SIDE	O.F.	OUTSIDE FACE	W	WIDTH
FDN	FOUNDATION	OPNG	OPENING	WP	WORK POINT
		PEP	PEDESTAL	WWF	WELDED WIRE FABRIC
		PLF	POUNDS PER FOOT	CL	CENTER LINE
		PROJ	PROJECTION	R or PL	PLATE

Pre-Engineered Building General Notes

- 19100.1.** The design fabrication and erection of the pre-engineered building shall conform to the requirements of AISC Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings and the Metal Building Manufacturer Design Practices Manual.
 - 19100.2.** Structural steel for primary framing shall conform to ASTM A572, Grade 50 or ASTM A36.
 - 19100.3.** Purlins & girts shall be cold-formed structural steel sections with stiffened flanges and have a minimum 55,000 psi yield strength.
 - 19100.4.** Structural system for metal building shall be a clear-span gabled rigid frame with no interior columns. Bay spacing, roof slope, and eave heights shall be as shown on the architectural drawings.
 - 19100.5.** Lateral stability along the sidewalls for the metal building shall be provided by the use of a cable or rod x-bracing. Coordinate type & locations of bracing with the Architect.
 - 19100.6.** All columns except those at the VIC building shall be designed as pinned ends that transmit no moment to the foundations. Columns at the VIC building are designed as cantilevered columns fixed at the base and free at the top.
 - 19100.7.** Bottom of base plate elevation for all pre-engineered building columns shall be at elevation 100'-0", unless otherwise noted. Coordinate actual Finish Floor elevation with Civil.
 - 19100.8.** Provide rod or cable x-bracing in roof as required to resist wind and seismic loads.
 - 19100.9.** Purlins shall be designed for a maximum live load deflection of L/150, where "L" is the purlin span in inches. Purlin deflection shall be limited to L/ 180 for wind and snow loads.
 - 19100.10.** Girts shall be designed for a maximum live load deflection of L/90, where "L" is the girt span in inches. Girts at Nichina panel, clay brick veneer, concrete masonry, or other brittle materials shall be designed for a maximum wind load horizontal deflection of L/240.
 - 19100.11.** Limit lateral deflection of all columns in any direction to limits shown in the following table, where "H" is the column height in inches.
- | COLUMN TYPE | | |
|------------------------------|------------|----------|
| WALL CONSTRUCTION | MAIN FRAME | END WALL |
| METAL WALL PANEL | H/60 | H/90 |
| FACE BRICK, MASONRY, NICHINA | H/100 | H/240 |
- 19100.12.** All rigid frame beams shall be designed for a maximum live load deflection of L/180, where "L" is the beam span in inches.
 - 19100.13.** The General Contractor shall purchase and install pre-engineered building anchor rods based on the Anchor Rod Setting Plan provided by the pre-engineered building manufacturer. See the Anchor Rod Schedule on this sheet for rod lengths required based on the rod diameter called for by the pre-engineered Metal Building Manufacturer.
 - 19100.14.** The Metal Building Manufacturer shall certify that the building has been designed for the loads shown on this drawing. Certification must state that the building has been designed for all roof loads, wind & seismic, as well as deflection tolerances noted in the pre-engineered building general notes & design loads. The Metal Building Manufacturer is to provide governing combined reactions (uplift, bearing, & thrust) for each column base location. The Metal Building Manufacturer is to prepare complete fabrication & erection drawings, fully engineered & sealed by a Professional Engineer licensed in the state of South Carolina.
 - 19100.15.** Metal Building Manufacturer shall design purlins & rigid frames for the mechanical equipment loads in addition to the uniform dead & live loads. Coordinate equipment weight, size, and locations with the Mechanical Contractor & the manufacturer.
 - 19100.16.** Metal Building Manufacturer shall provide miscellaneous steel as required to support the mechanical equipment.
 - 19100.17.** No individual anchor rod shall be set a distance less than 3" from its centerline to the edge of slab, in order to comply with ACI 318-14 requirements.
 - 19100.18.** The Metal Building Manufacturer is responsible for all header design at wall openings.

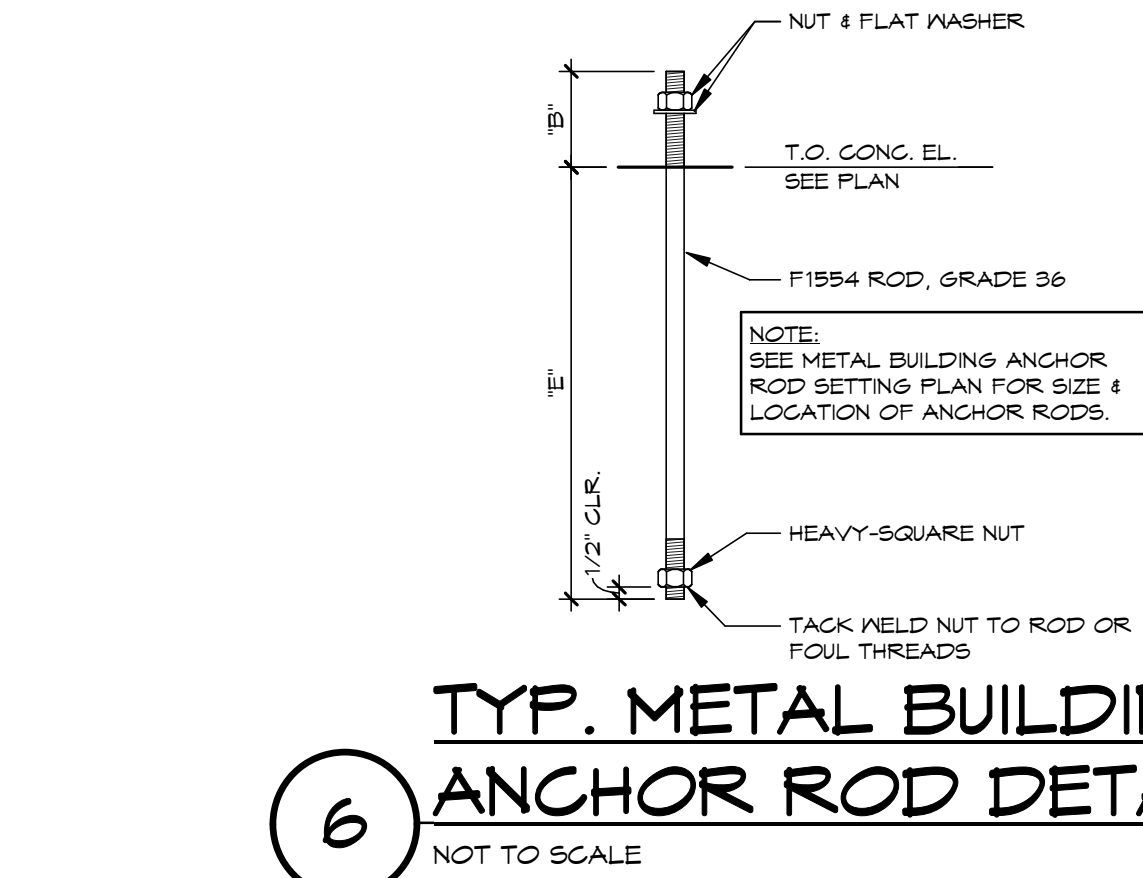
Pre-Engineered Building Design Loads

- Roof Dead Load: Per MBM
- Roof Collateral Load: 3 psf
- Roof Live Load: 20 psf
- Snow Load:
 - Ground Snow Load: 10 psf
 - Flat-roof Snow Load (P_f) = 7 psf
 - Sloped-roof Snow Load (P_s) = 7 psf
 - Snow Exposure Factor (C_e) = 1.0
 - Snow Load Importance Factor (I_s) = 1.0
 - Thermal Factor (C_t) = 1.0 @ Main Building
 - Thermal Factor (C_t) = 1.2 @ VIC Building
- Wind Load:
 - Ultimate Wind Speed, V_{ult}: 114 mph
 - Nominal Design Wind Speed, V_{des}: 88.3 mph
 - Wind Importance Factor (I_w) = 1.0
 - Building Category II
 - Wind Exposure C
- Seismic:
 - Risk Category II
 - Seismic Importance Factor (I_s) = 1.0
 - S_e = 0.342
 - S₁ = 0.111
 - S_d = 0.348
 - S_{d1} = 0.176
 - Site Class D (presumed per ASCE 7-16 Sect. 11.4.3)
 - Seismic Design Category C
 - Basic Structural System -
 - Response Modification Coefficient (R) - Per MBM
 - Deflection Amplification Factor (C_d) - Per MBM
 - Analysis Procedure - Per MBM
- Load Combinations: Per MBM
- Building Code:
 - 2018 International Building Code
 - ASCE 7-16



METAL BLDG. ANCHOR ROD SCHEDULE

ROD DIAMETER	EMBEDMENT LENGTH 'E'	THREAD PROJ. 'B'	REMARKS
1 1/4"	2'-0"	4"	-----
1"	1'-6"	4"	-----
7/8"	1'-6"	5"	-----
3/4"	1'-4"	5"	-----
5/8"	1'-4"	5"	-----
1/2"	1'-8"	2"	-----



THE HILL FIRM
ARCHITECTS
6003 OLD GREENWOOD RD. SUITE D - FT SMITH, AR 72903
PH: 479-494-1808 - WWW.HILLFIRM.NET

COMMENTS

DATE

#

Insurance Auto Auction, Inc.
430 Two Notch Rd
Lexington, South Carolina 29073

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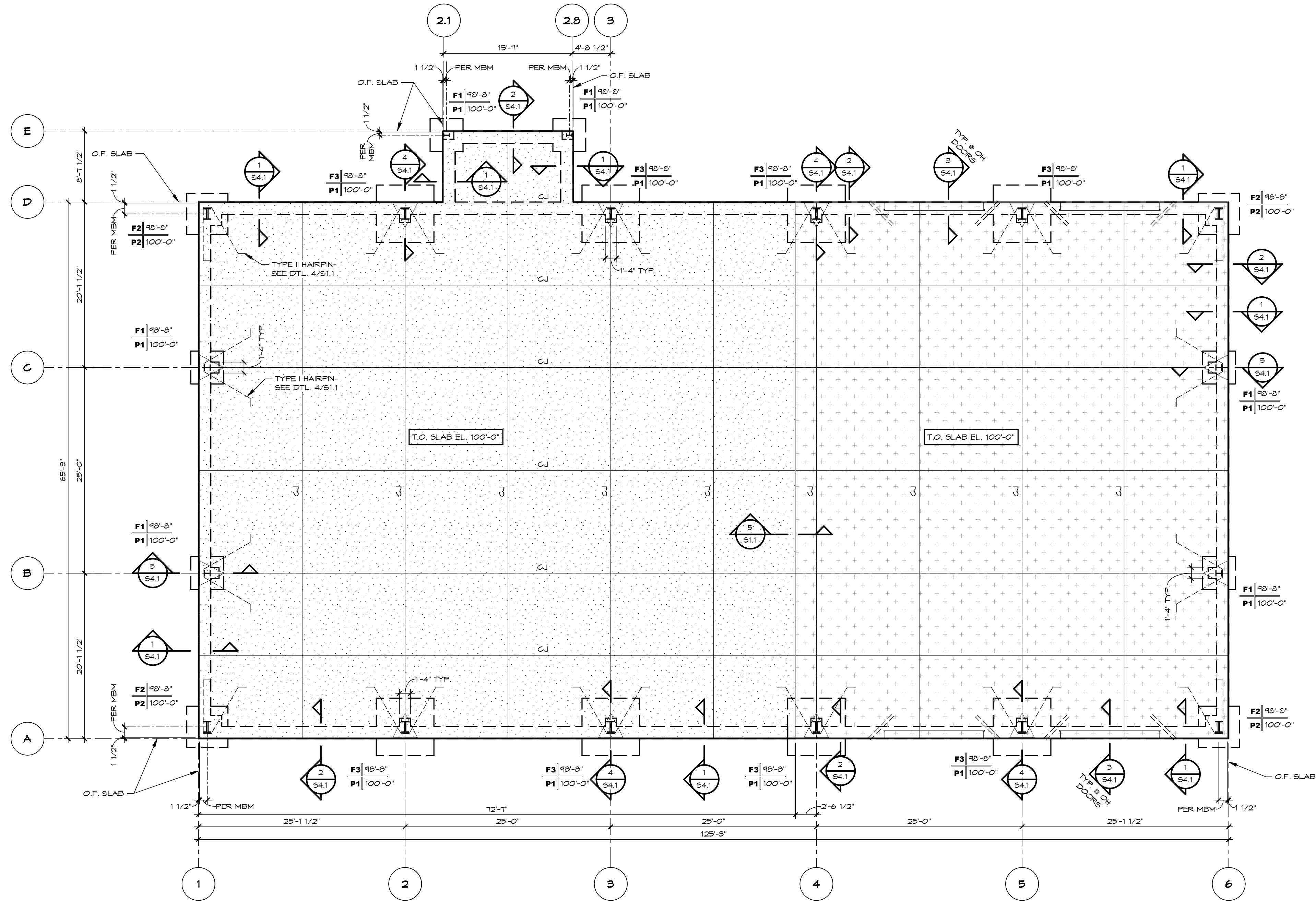
TATUM SMITH WELCHER
STRUCTURAL ENGINEERS
TSW #: 20052 PM: BCC DE: TPG

FOUNDATION GENERAL NOTES & TYP. DETAILS

DATE: 05/13/2020 JOB NO: 2020-09

SHEET: **S1.1**

5/14/2020 9:04:27 AM C:\Users\eng14\Documents\Revit Local Files\20052 - Insurance Auto Auction - Lexington, SC (Hill Firm) - R20_eng14.rvt © 2020 THE HILL FIRM - ARCHITECT. ALL RIGHTS RESERVED



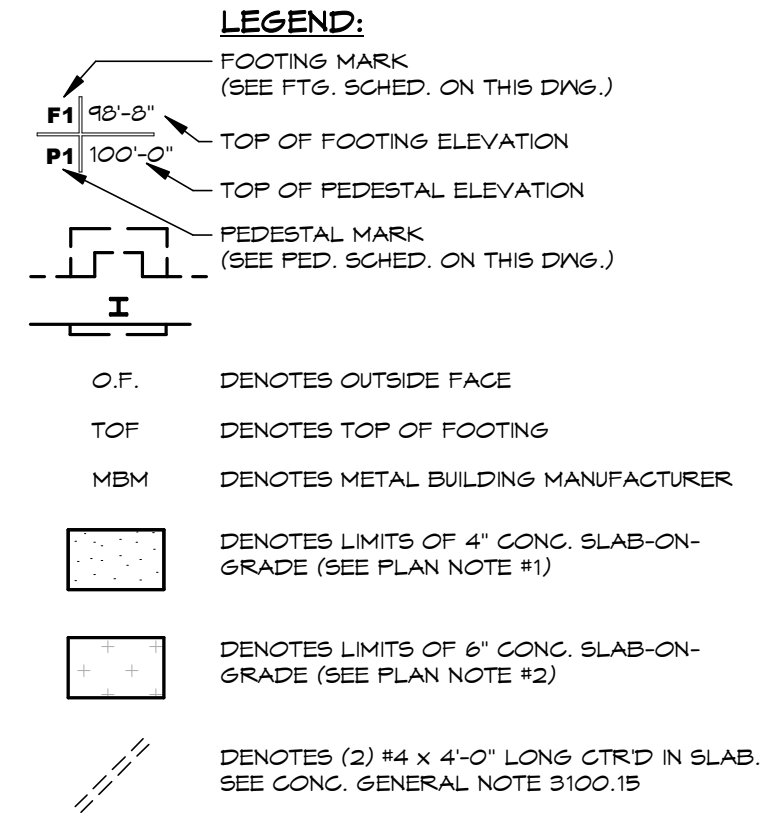
1 FOUNDATION PLAN
1/8" = 1'-0"

PEDESTAL SCHEDULE					
MARK	PEDESTAL SIZE		VERTICAL DOVELS	TIES	REMARKS
	WIDTH	LENGTH			
P1	1'-4"	2'-0"	(8) #5 DOVELS	#3 TIES @ 10" o.c.	SEE NOTES #1 & #2
P2	2'-0"	2'-0"	(10) #5 DOVELS	#3 TIES @ 10" o.c.	SEE NOTES #1 & #2

PEDESTAL SCHEDULE NOTES:
1. SEE FOUNDATION PLAN FOR LOCATION AND ORIENTATION.
2. (3) TIES REQUIRED IN TO 5"

FOOTING SCHEDULE					
MARK	FOOTING SIZE			REINFORCING	REMARKS
	B	L	t		
F1	4'-0"	4'-0"	1'-4"	(5) #5 E.V. BOTT.	-----
F2	5'-0"	5'-0"	1'-4"	(6) #5 E.V. BOTT.	-----
F3	7'-0"	7'-0"	2'-0"	(9) #5 E.V. BOTT.	-----

CONTRACTOR NOTES:
1. FOUNDATION DESIGN HEREIN IS BASED UPON ANTICIPATED METAL BUILDING REACTIONS AS DEVELOPED BY TATUM SMITH WELCHER ENGINEERS, INC. IN CONSIDERATION OF THE PLANNED BUILDING TYPE (GABLED, CLEAR SPAN & "POLE BARN"), BAY SPACING AND SPAN. THE GENERAL CONTRACTOR SHALL FURNISH FOUNDATION REACTIONS SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF SOUTH CAROLINA TO TATUM SMITH WELCHER ENGINEERS, INC. FOR REVIEW. CONTRACTOR SHALL ALLOW FOR A MINIMUM REVIEW TIME OF TEN (10) BUSINESS DAYS IN THEIR CONSTRUCTION SCHEDULE.
2. SPREAD FOUNDATION SIZES SHOWN ARE FOR BIDDING PURPOSES ONLY. REVISIONS MAY BE REQUIRED FOLLOWING RECEIPT AND REVIEW OF FINAL SEALED MBM FOUNDATION REACTIONS.



- PLAN NOTES:**
- SLAB-ON-GRADE CONSTRUCTION: 4" CONCRETE SLAB REINFORCED W/ 6 x 6-W1.4 x W1.4 W/F ON 10 MIL POLYETHYLENE FILM OVER 4" LAYER OF COMPACTED FREE-DRAINING FEA GRAVEL, CRUSHED STONE, OR COARSE SAND HAVING NO MORE THAN 50% PASSING THE NO. 50 SIEVE AND NOT MORE THAN 5% PASSING THE NO. 200 SIEVE. PLACE W/F 2" CLR. FROM TOP OF SLAB. SEE GEN. NOTE 3100.11.
 - SLAB-ON-GRADE CONSTRUCTION: 6" CONCRETE SLAB REINFORCED W/ 6 x 6-W1.4 x W1.4 W/F ON 10 MIL POLYETHYLENE FILM OVER 4" LAYER OF COMPACTED FREE-DRAINING FEA GRAVEL, CRUSHED STONE, OR COARSE SAND HAVING NO MORE THAN 50% PASSING THE NO. 50 SIEVE AND NOT MORE THAN 5% PASSING THE NO. 200 SIEVE. PLACE W/F 3" CLR. FROM TOP OF SLAB. SEE GEN. NOTE 3100.11.
 - ALL ELEVATIONS BASED ON FINISH FLOOR ELEVATION 100'-0". COORDINATE ACTUAL FINISH FLOOR ELEVATION AND BUILDING ORIENTATION ON SITE WITH CIVIL.
 - CENTER COLUMN FTGS. UNDER ANCHOR ROD PATTERN. (U.N.O.)
 - TOP OF FOOTING ELEVATION 98'-8", U.N.O.
 - TOP OF PEDESTAL ELEVATION 100'-0".
 - SEE DWG. S1.1 FOR GENERAL NOTES & TYPICAL DETAILS.
 - SEE ARCH. DWGS. FOR DIMENSIONS NOT SHOWN.
 - "CJ" DENOTES CONTROL OR CONSTRUCTION JOINT. (SEE DTLS. 1/5:1.1 & 2/5:1.1)
 - COORDINATE ALL DOOR SIZES & LOCATIONS WITH ARCH. DWGS.
 - COORDINATE LOCATIONS OF PLUMBING LINES W/ PLUMBER PRIOR TO PLACING FOOTINGS & SLABS-ON-GRADE.
 - SEE ARCH./PLUMBING DWGS. FOR LOCATIONS OF ALL FLOOR DRAINS, SLOPED & RECESSED SLABS.
 - COORDINATE ALL DIMENSIONS WITH METAL BUILDING MANUFACTURER.



#	DATE	COMMENTS

Insurance Auto Auction, Inc.
430 Two Notch Rd
Lexington, South Carolina 29073

PERMIT - CONSTRUCTION DOCUMENTS

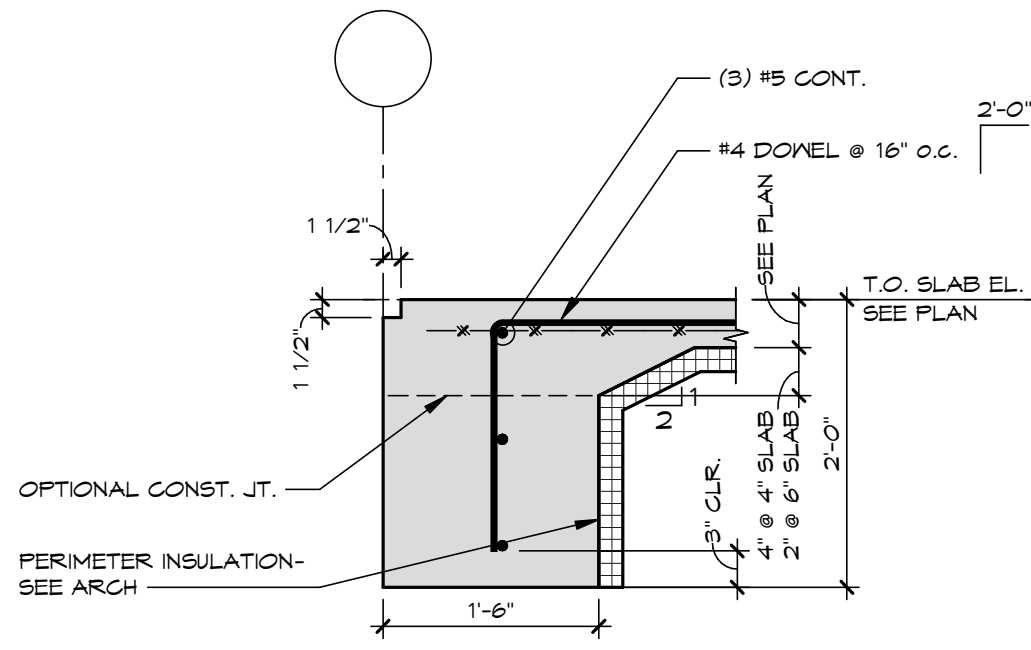


FOUNDATION PLAN

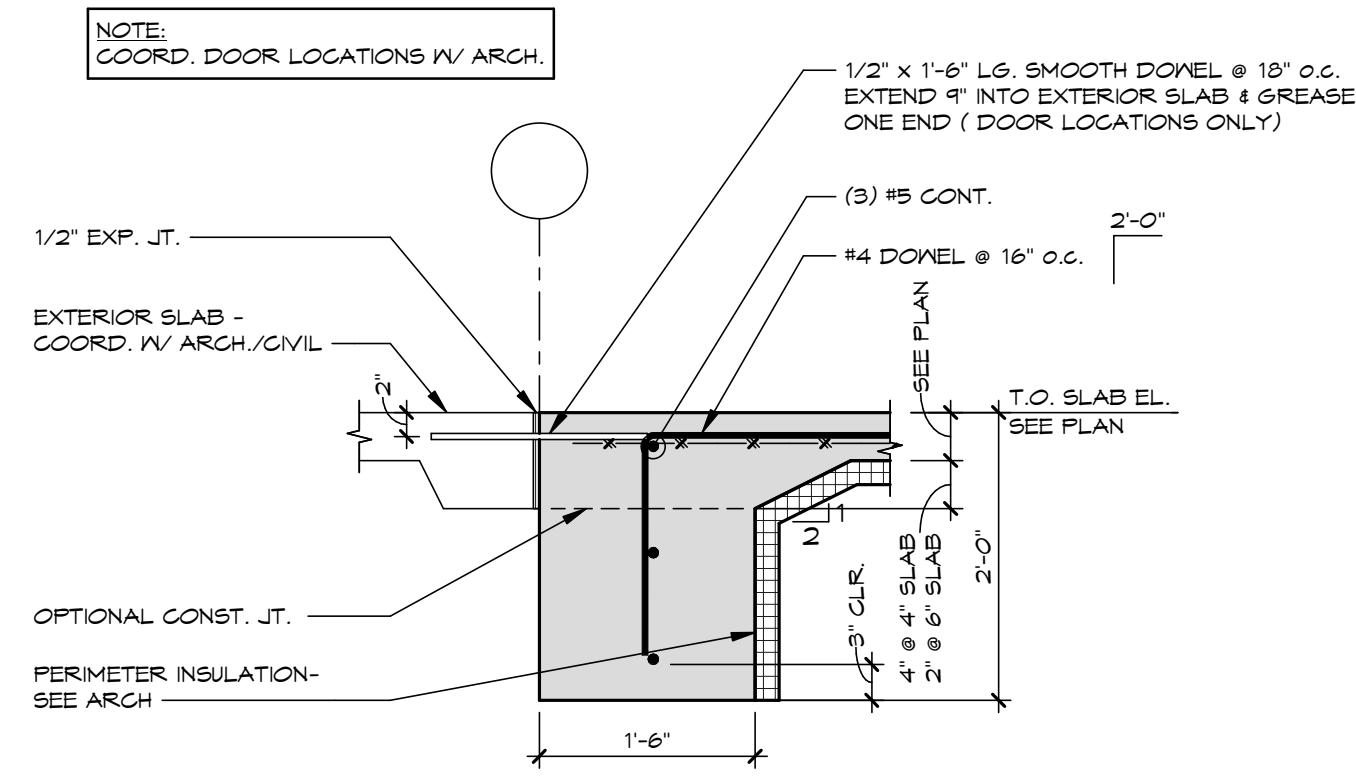
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SHEET: **S2.1**

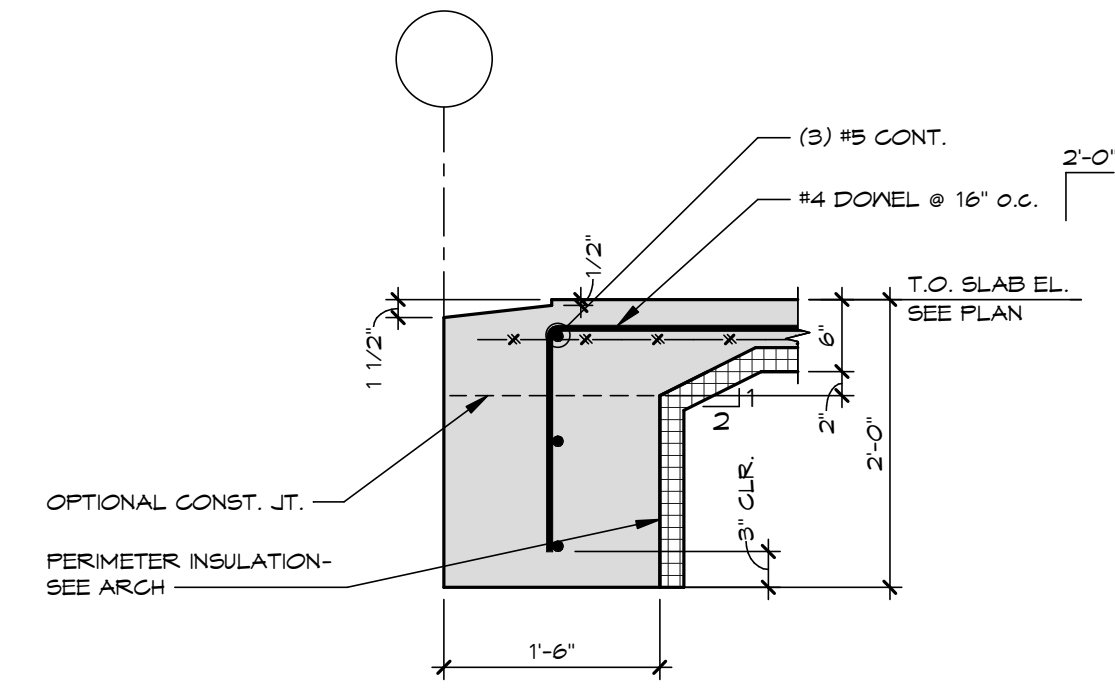




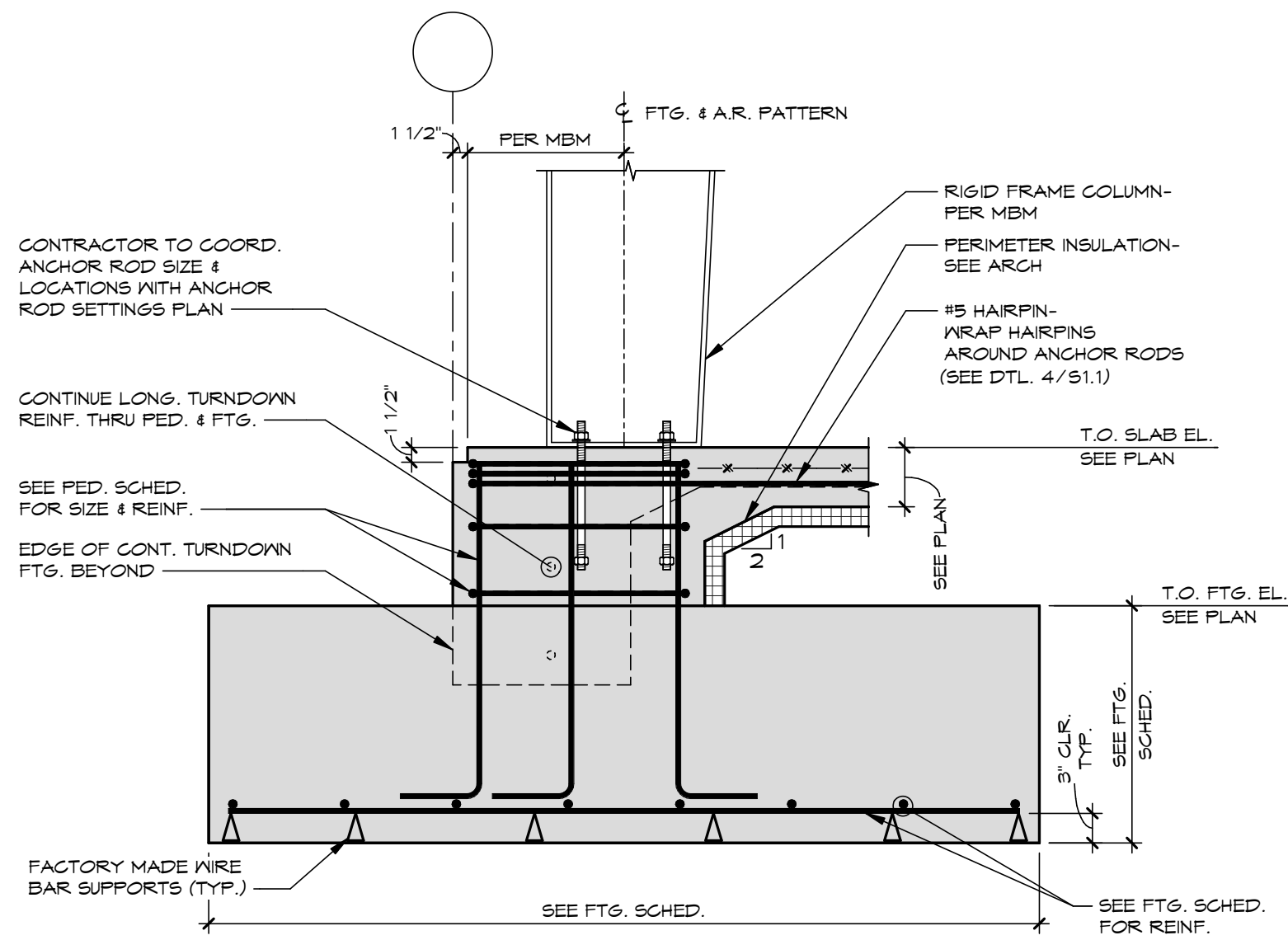
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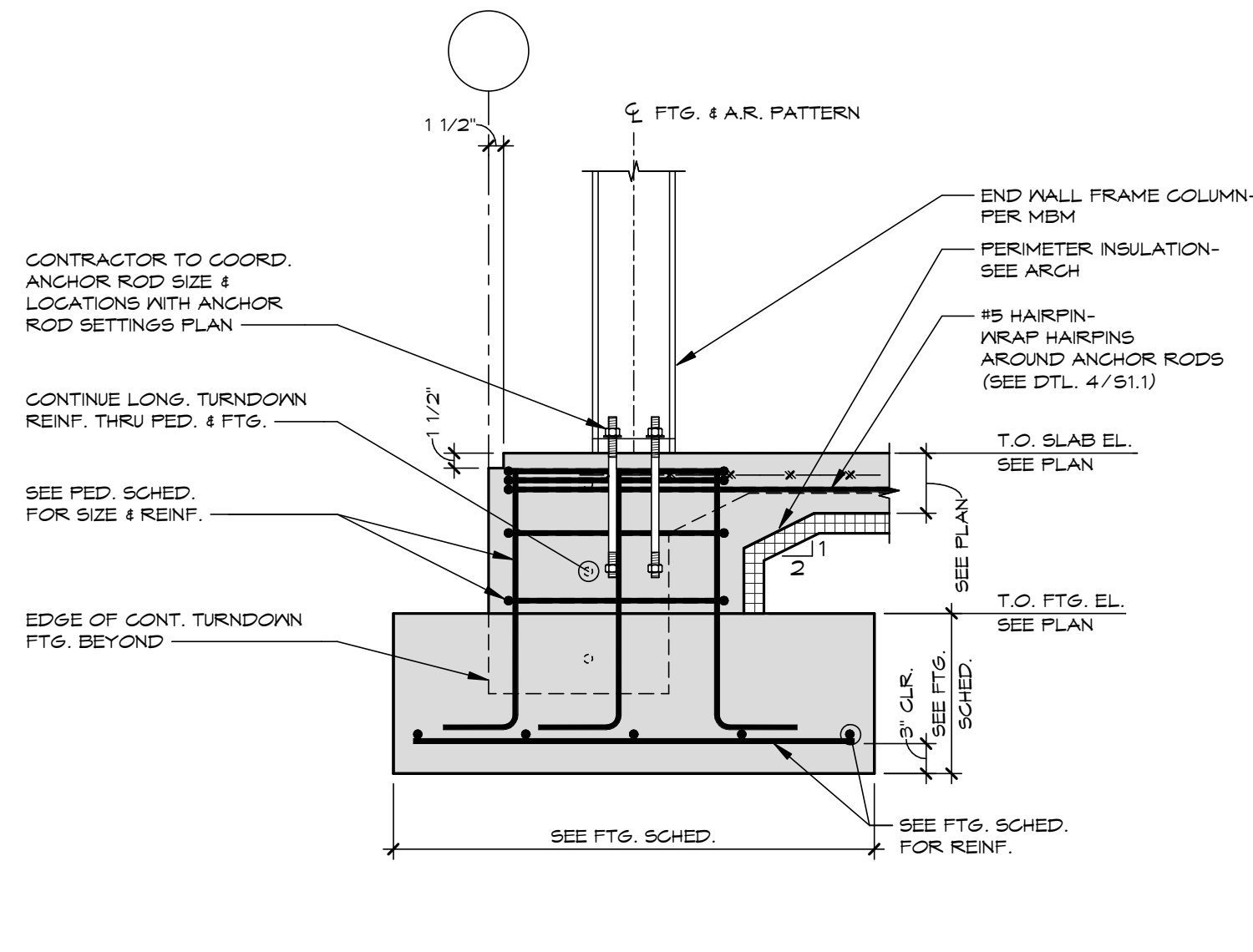
2 SECTION
3/4" = 1'-0"



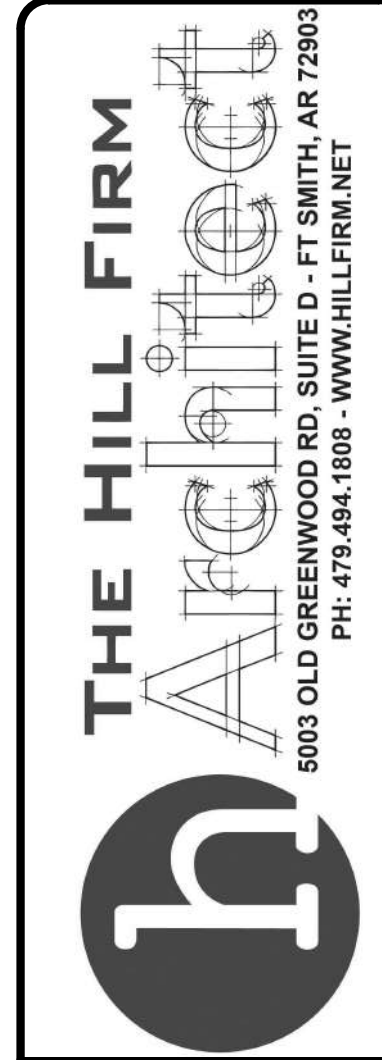
3 SECTION
3/4" = 1'-0"



4 SECTION
3/4" = 1'-0"



5 SECTION
3/4" = 1'-0"



5003 OLD GREENWOOD RD. SUITE D - FT SMITH, AR 72903
PH: 479.494.1808 - WWW.HILLFIRM.NET

#	DATE	COMMENTS

Insurance Auto Auction, Inc.
430 Two Notch Rd
Lexington, South Carolina 29073

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FOUNDATION DETAILS

DATE: 05/13/2020 JOB NO: 2020-09

SHEET: **S4.1**



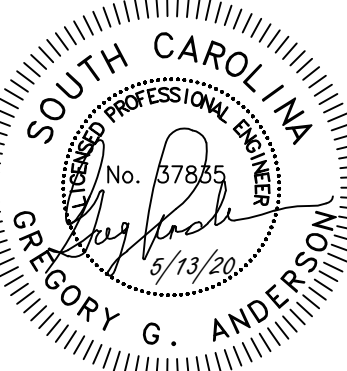


Greg Anderson, Engineer
 9 WEST 26th CIRCLE
 Fayetteville, AR 72701
 PHONE: 479-601-3331
 EMAIL: ga@gaenr.com
 PROJECT # 20006

THE HILL FIRM
 ARCHITECT
 5803 OLD GREENWOOD RD, SUITE D - FT SMITH, AR 72903
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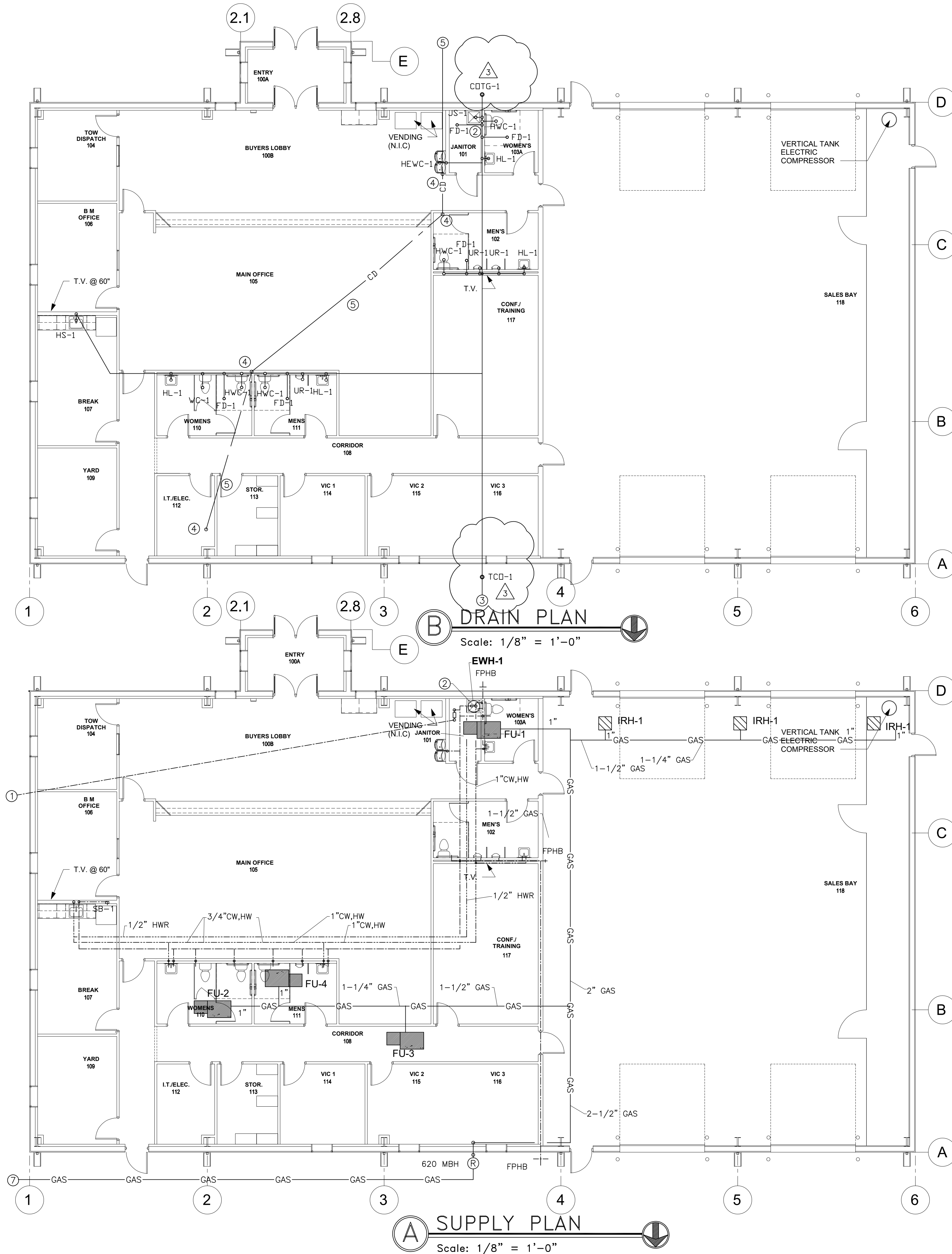
#	DATE	COMMENTS
1	08/11/20	CIVIL AND PLAN MODIFICATIONS
2	09/02/20	ADD SECURITY CAMERAS ON SITE
3	11/04/20	PLUMBING COORDINATION

Insurance Auto Auction, Inc.
 TBD
 Lexington, South Carolina 29073
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PLUMBING PLANS
 DATE: 05/13/20
 JOB NO. 2020-09

SHEET:
P1.0



DRAIN PLAN KEYED NOTES

- ① COORDINATE CONDENSATE DRAIN REQUIREMENTS WITH HVAC CONTRACTOR.
- ② RISE NEW FOR RELIEF TO JAN SINK
- ③ 4" DRAIN LINE TO SEPTIC SYSTEM. SEE CIVIL SITE UTILITY PLAN.
- ④ 2" HUB DRAIN ABOVE CEILING FOR COOLING AND HEATING CONDENSATE DRAINS. COORDINATE WITH CIVIL ENGINEER, MC, AND AHJ.
- ⑤ 2" CONDENSATE DRAIN SYSTEM BELOW SLAB. RUN OUT TO STORM DRAIN INLET. COORDINATE WITH CIVIL ENGINEER, MC, AND AHJ.

PLUMBING LEGEND

NEW BUILDING DRAIN		COLD / DOMESTIC WATER SUPPLY (CW)	
BUILDING SEWER		HOT WATER SUPPLY (HW)	
VENT		FIRE LINE	
VENT THRU ROOF (VTR)		FIRE DEPARTMENT CONNECTION LINE	
PRESSURE REDUCING VALVE (PRV)		TEMPERATURE & PRESSURE (T&P) RELIEF VALVE	
CLEANOUT TO GRADE (COTG)/ TWO WAY CLEANOUT (TWCO)/ FLOOR CLEANOUT (FCO)		FROST PROOF HOSE BIBB (FPHB)	
FLOOR DRAIN (FD) FLOOR SINK (FS) SAFE WASTE DRAIN (SWD)		WALL CLEANOUT (WCO)/ STACK CLEANOUT (SCO)/ END OF STRAIGHT LINE CLEANOUT (CO)	
UTILITY BOX (UB) SUPPLY BOX (SB)		UNION	
PIPE TURNING DOWN		LINE CAP	
TEE UP		GATE VALVE	
TEE DOWN		"Y" STRAINER	
DROP AND RUN		REDUCE PRESSURE PRINCIPLE BACKFLOW PREVENTER (RP2)	
DRAIN		REGULATOR	
TEE OFF BOTTOM		DROP AND TURN	
TEE OFF TOP		PIPE TURNING UP	

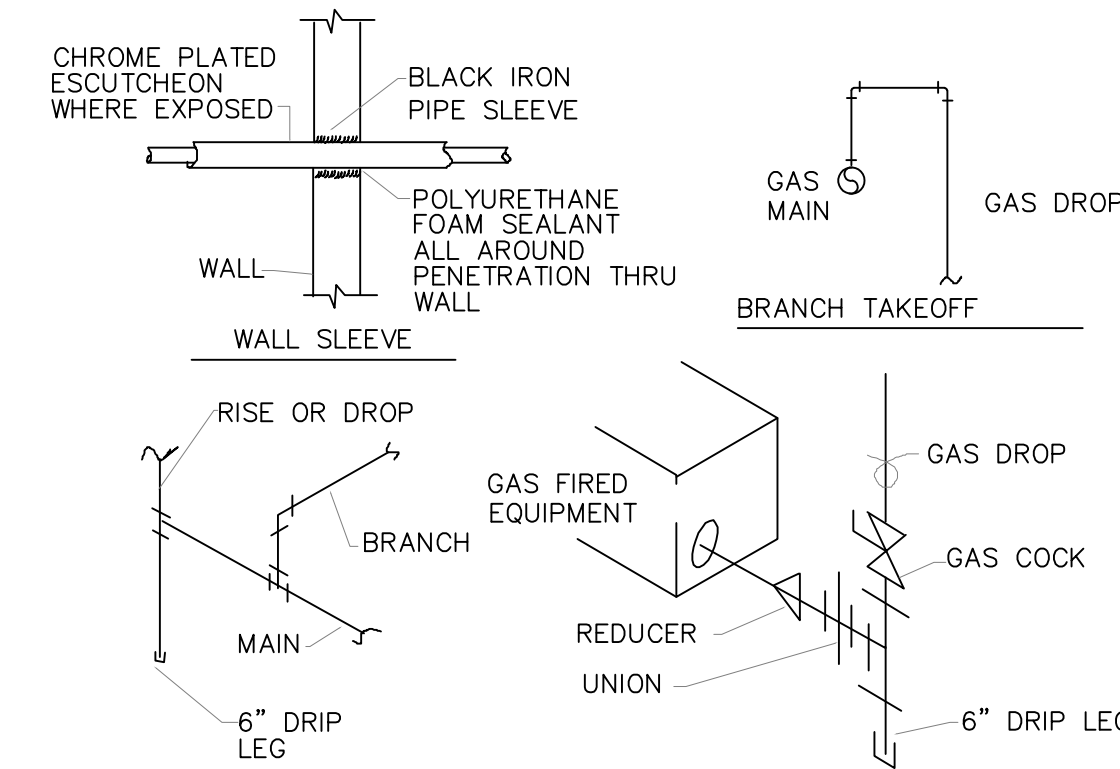
SUPPLY PLAN KEYED NOTES

- ① 1-1/4" CW SERVICE TO BUILDING FROM CITY MAIN.
- ② 3/4" CW, 3/4" HW PIPING DOWN TO CONNECTION AT WATER HEATER.
- ③ ACCESSIBLE SHUT OFF VALVE.
- ④ 3/4" CW TO HOSE BIBB. PROVIDE ACCESSIBLE SHUT OFF VALVE ABOVE CEILING.
- ⑤ 1" MFG TO METER. COORD WITH CIVIL ENGINEER AND GAS COMPANY.
- ⑥ 3/4" DW TO RUN AND DRIVE BUILDING HOSE BIBBS.
- ⑦ PROPANE GAS SERVICE TO STORAGE TANK. COORDINATE CONNECTION LOCATION, TANK LOCATION AND PIPE SIZE WITH CIVIL ENGINEER AND GAS PROVIDER.

GENERAL PLUMBING NOTES

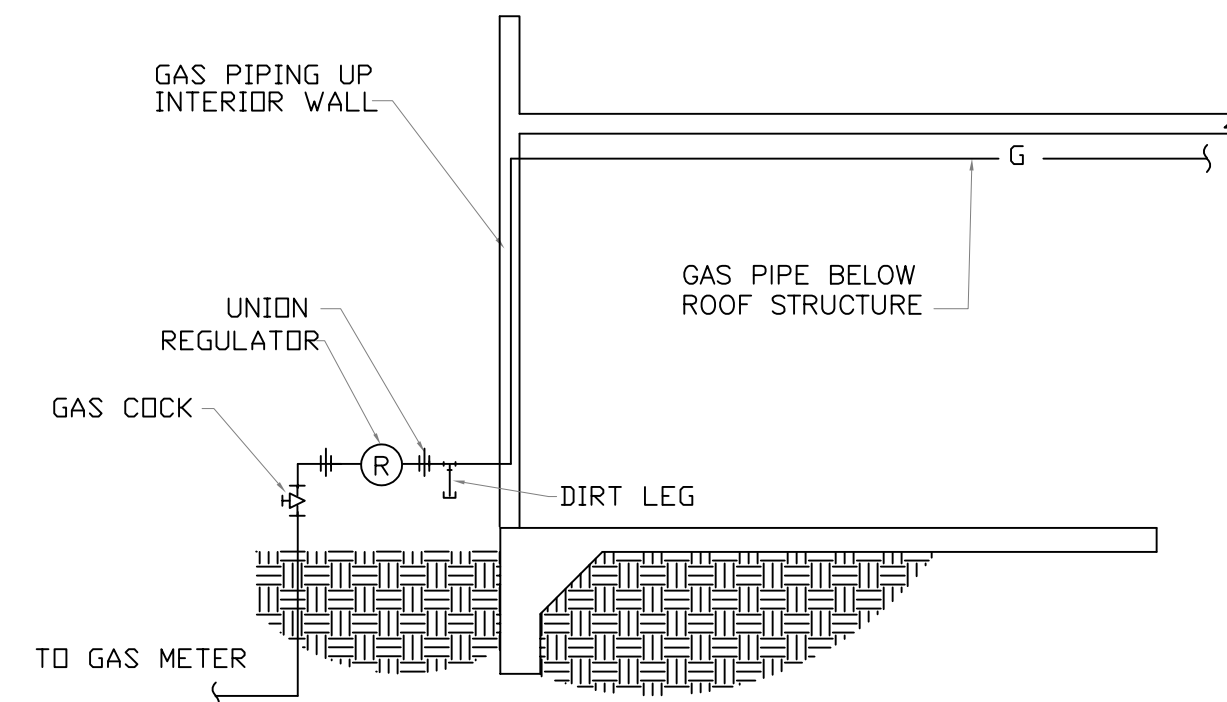
*GENERAL PLUMBING NOTES PERTAIN TO ALL PLUMBING SHEETS.

- ALL WORK SHALL COMPLY WITH APPLICABLE PLUMBING CODES. REQUIREMENTS OF THE STATE HEALTH DEPARTMENT AND LOCAL ORDINANCES.
- PLUMBING SUPPLY AND DRAIN PLANS ARE DIAGRAMMATICAL IN NATURE. REGARDLESS OF HOW SHOWN ON THE PLANS, CONTRACTOR SHALL INSTALL ALL PIPING IN A CONCEALED LOCATION UNLESS OTHERWISE DIRECTED. THE FINAL LAYOUT SHALL BE GOVERNED BY ACTUAL FIELD CONDITIONS WITH ALL MEASUREMENTS VERIFIED AT THE SITE AND COORDINATED WITH OTHER TRADES. DURING CONSTRUCTION, ANY CONFLICT BETWEEN ARCHITECTS INTENT AND THE CONTRACTORS INTERPRETATION OF PLUMBING PLANS SHALL BE RESOLVED SO AS TO MAINTAIN THE ARCHITECTS AESTHETIC EXPECTATIONS OF THE PROJECT.
- INSTALL WATER HAMMER ARRESTOR AT END OF EACH BRANCH ON HOT AND COLD WATER PIPING, EACH BATTERY OF WATER CLOSETS, AT EACH WATER HEATER, AND AT OTHER PLACES AS PER MANUFACTURER'S SIZING GUIDE.
- WHETHER SHOWN OR NOT ON THESE PLANS, INSTALL ISOLATION VALVES IN EVERY SUPPLY FIXTURE BANK OR GROUP AND AT ALL HOT WATER RETURN BRANCHES. PROVIDE ACCESS PANEL EQUAL TO ACCUDOR MODEL FW5050 WHERE REQUIRED TO ALLOW ADEQUATE ACCESS TO VALVES. CONTRACTOR SHALL NOT INSTALL ANY MAINTENANCE ITEMS ABOVE HARD CEILINGS UNLESS ACCESS IS PROVIDED. THIS SHALL INCLUDE VALVES, TRAP PRIMER VALVES AND ANY OTHER ITEMS THAT REQUIRE ACCESS AFTER CONSTRUCTION IS COMPLETED.
- AT FREEZE PROOF HOSE BIBBS, PIPING TO AND AROUND VALVE PORTION OF HOSE BIBBS SHALL BE INSIDE THE INSULATION. SEAL AIR TIGHT AT SHEATHING PENETRATION.
- FOR HANDICAPPED WATER CLOSETS, FLUSH CONTROLS SHALL BE MOUNTED ON THE OPEN SIDE OF TOILET AREAS. CENTERLINE OF HANDICAPPED WATER CLOSET SHALL BE 18" FROM NEAREST FINISHED WALL OR PARTITION.
- ALL PIPING SHALL BE ANCHORED AND SUPPORTED PER STANDARD INDUSTRY PRACTICE AND PER MANUFACTURER'S RECOMMENDATIONS.
- FLOOR DRAINS ON THIS PROJECT ARE THE SAME SIZE AS THE DRAIN LINE TO WHICH THEY ARE CONNECTED UNLESS OTHERWISE NOTED. IF DRAIN LINES ARE NOT MARKED, THE MINIMUM SIZE PER SPECIFICATION IS 2". ALSO THE SMALLEST DRAIN LINE THAT IS ALLOWED BY CODE TO BE BELOW SLAB IS 2". FOR INDIVIDUAL DRAIN LINES NOT SIZED ON PLANS, REFER TO PLUMBING ROUGH-IN MOUNTING HEIGHT SCHEDULE. A 4" DRAIN, AS INDICATED ON PLANS, SHALL BE PROVIDED AT ALL RPZ'S 3" AND BELOW. A 6" DRAIN SHALL BE PROVIDED AT ALL RPZ'S OVER 3".
- VENT THROUGH ROOF (VTR) SHALL NOT BE LOCATED WITHIN 10' OF A FRESH AIR INTAKE OR IN LOW SPOTS OF VALLEYS. COMBINE VENTS AS MUCH AS POSSIBLE TO MINIMIZE THE QUANTITY OF VTR'S. LOCATE VTR'S ON THE BACK SIDE OF THE BUILDING WHERE POSSIBLE. CONTRACTOR TO OFFSET AS REQUIRED TO MEET THESE REQUIREMENTS.
- OUTSIDE OF FOOTING, MAINTAIN 10' BETWEEN SEWER AND DOMESTIC WATER LINES UNLESS WRITTEN PERMISSION IS OBTAINED FROM LOCAL ADMINISTRATIVE AUTHORITY.
- CONTRACTOR TO REVIEW ALL PLAN SHEETS FOR FIXTURE TAGS. MOST FIXTURE TAGS ARE LOCATED ON THE FIRST PLAN SHEET. FIXTURES THAT DO NOT APPEAR ON THE FIRST SHEET WILL BE TAGGED ON OTHER SHEETS.
- ALL ABOVE GROUND WATER LINES SHALL BE COPPER OR PEX. ALL UNDERGROUND SANITARY SEWER SERVICE PIPING SHALL BE SCHEDULE 40 PVC. ABOVE GROUND INDOOR PIPING SHALL BE PVC OR CELL CORE.
- THIS NOTE DELETED
- INSULATE TUB AND WATER CLOSET WASTE LINES FROM 2nd FLOOR WITH R-38 BATT INSULATION. TYP.
- COORDINATE LOCATION OF SANITARY STACKS WITH STRUCTURE. NO OFFSETS SHALL BE INSTALLED IN THE SANITARY STACK VENTS.
- MIRROR PLUMBING PLAN FOR OTHER SIDE OF BUILDING.
- INSTALL APPROVED TRAP GUARD THAT CONFORMS TO NSF-14, CSA, B602-94 AND CSA B79-94. INSTALL IN ALL FLOOR DRAINS, HUB DRAINS, AND FLOOR SINKS.
- PROVIDE FIRE RATED COVER AT CLEANOUTS THAT OCCUR IN FIRE RATED WALLS.
- PROVIDE FIRE RATED UB-1 AND SB-1 WHEN INSTALLED IN A FIRE RATED WALL.



B GAS PIPING DETAIL

Scale: N.T.S.



A GAS RISER DETAIL

N.T.S.

PLUMBING EQUIPMENT SCHEDULE

MARK	DESCRIPTION	MFGR/ MODEL	TRIM	COMMENTS	ELECTRICAL REQUIREMENTS
HWC-1	HANDICAPPED WATER CLOSET FLUSH TANK FLOOR MNTD. FLOOR OUT	AMERICAN STANDARD CADET IV	17" HIGH 1.6 GAL. FLUSH	ELONGATED RIM, ROUGH-IN PER MFG.'S SPECIFICATIONS.	VITREOUS CHINA. PROVIDE COMMERCIAL SEAT INSTALL FLUSH HANDLE TO THE OPEN AREA OF THE ROOM.
WC-1	WATER CLOSET FLUSH TANK FLOOR MNTD. FLOOR OUT	AMERICAN STANDARD CADET IV	STD HEIGHT 1.6 GAL. FLUSH	ELONGATED RIM, ROUGH-IN PER MFG.'S SPECIFICATIONS. 3517C BOWL 4188 TANK	VITREOUS CHINA. PROVIDE COMMERCIAL SEAT
HL-1	HANDICAP LAVATORY COUNTER MOUNTED 19"x15" 4" HOLES O.C. VITREOUS CHINA	AMERICAN STANDARD	MOEN CHATEAU FAUCET 64920 1-1/4" O.D. TAILPIECE, 802-0950 3/8" ANGLE STOP I.P.S CONNECTION.		804-1180 CAST BRASS 1-1/4 x 1-1/4 ADJUSTABLE "P" TRAP W/ CLEANOUT & SLIP JOINT INLET.
HL-2	LAVATORY WALL MTD 20 1/2x18 1/4 VITREOUS CHINA ADA	AMERICAN STD LUCERNE 0355.012	AMERICAN STANDARD RELIANT 3, 7385.004 SINGLE LEVER FAUCET HANDLE LESS DRAIN & POPUP. McGuire 155WC OFFSET CHROME PLATED CAST BRASS GRID DRAIN. SEAMLESS BRASS TAILPIECE W/ CAST BRASS LOCKNUT.		CONCEALED ARM CARRIER JR SMITH 0700 INSULATION EQUAL TO TRUEBRO LAV-GUARD PVC TYPE INSULATION AROUND P TRAP & IPS CONNECTIONS
HUR-1	URINAL FLUSH VALVE WALL MNT'D VITREOUS CHINA ADA	AMERICAN STANDARD 6590001.020		INTEGRAL FLUSHING RIM, 3/4" TOP SPUD 2" FEMALE FLANGED OUTLET CONNECTION. PROVIDE SLOAN 186-1.	PROVIDE J. R. SMITH 637 W/ HANCER PLATE AND LOWER BEARING PLATE
EW-1	ELECTRIC WATER HEATER, DIA.16" 10 GAL.	LOCHINVAR JRC010DS			PROVIDE CATCH PAN 120V, 1650W SINGLE PHASE
ET-1	EXPANSION TANK, ASME RATED 10-1/4"x9-1/4" MAX. ACCEPT VOL. .9 GAL. TOTAL VOL. 2.1 GAL.	AMTROL AST-5		INSTALL BETWEEN BACKFLOW PREVENTER AND WATER HEATER. ADJUST T&P ON WATER HEATER IF NECESSARY TANK PRECHARGED TO 55 PSIG.	MOUNT ON WALL ALLOW AMPLE ROOM FOR MAINTENANCE.
CP-1	CIRCULATING PUMP 120F,1/12HP,24LBS BRONZE BODY W/ BRASS IMPELLER	AMTROL CIRCULATING PUMP RBW2			TEMP CONTROL KIT 120-ATC. 3/4" SIZE 120V, 1/12 HP PROVIDE CORD AND PLUG.
SB-1	SUPPLY BOX	GUY - GRAY BIM- 875	1/2" FIP SUPPLY		
S-1	SELF RIMMING SINGLE COMP. STAINLESS STEEL SINK. OVERALL 17x20 INSIDE COMP. 14x14x7-1/2	ELKAY LUSTERTONE LR-1720		SINGLE LEVER W/ GOOSE NECK SWIVEL FAUCET LK-4122, 3-1/2" OPENING DRAIN. McGuire 151M HEAVY DUTY BRASS BASKET & STRAINER, 1 1/2" CHROME PLATED TAILPIECE. McGuire 8912 1 1/2" x 1 1/2" HEAVY DUTY CHROME PLATED CAST BRASS P-TRAP W/ CLEANOUT PLUG.	PROVIDE TWO FAUCET HOLES ON DECK. McGuire 170LK CHROME PLATED SOLID BRASS ANGLE STOPS W/ 5" CHROME PLATED COPPER EXTENSION TUBE & LOOSE KEYS. FLEXIBLE CHROME PLATED COPPER RISERS.
JS-1	JANITOR'S SINK FLOOR MNT'D 24"x24" x12" TERRAZZO	FIAT PRECAST TERRAZZO FLOOR SINK TSB-200		ELJER 749-1450 SINK FAUCET W/ 8-7/16" SPOUT, 5" RUBBER HOSE, ZINC LEVER HANDLES.	W/ VACUUM BREAKER, INTEGRAL STOPS. PROVIDE TILING FLANGE WHERE REQUIRED PROVIDE CHECK VALVES ON HOT AND COLD WATER.
RPZ-1	REDUCE PRESSURE PRINCIPLE BACKFLOW PREVENTER.	WATTS LF909	1" RPZ W/ WATTS BALL VALVES, "Y" STRAINER		PROVIDE 4" DRAIN FOR 3" AND SMALLER AND 6" DRAIN FOR LARGER THAN 3".
PRV-1	PRESSURE REDUCING VALVE	WATTS 223	1" ALL BRONZE FOR POTABLE WATER TO 70 PSIG SETTING		
FD-1	FLOOR DRAIN CAST IRON ADJUSTABLE STRAINER NICKEL BRONZE STRAINER HEAD, SQUARE.	J. R. SMITH 2005			PROVIDE PROSET TRAP GUARD INSERT. PROVIDES SEAL TO PREVENT TRAP FROM DRYING OUT. SEE PLANS AND/OR GENERAL PLUMBING NOTES FOR SIZES
HEWC-1	HANDICAPPED AND STANDARD HEIGHT. ELECT. WATER COOLER. CIRCULAR, STAINLESS STEEL. LEAD FREE. BI-LEVEL. WALL SURFACE MTD COOLING UNIT.	ELKAY BARRIER FREE SELF CONTAINED BI-LEVEL EZS-TL8 WITH LKAPREZL APRON		HEAVY-GAUGE GALVANIZED STEEL WALL MOUNTING FRAME. 8 GALLONS PER HOUR. FLEXIBLE SAFETY BUBBLER LIGHT GRAY GRANITE VINYL CLAD STEEL. PUSHBARS FRONT AND SIDES	1PH, 380 WATTS. 1/5 HP, 4.5 FLA.
HB-1	HOSE BIBB. MILD CLIMATE SILLCOCK WHEEL HANDLE 3/4" HOSE. STAINLESS STEEL BOX W/ 180° COVER OPENING.	J. R. SMITH 5572		WALL HYDRANT W/ INTEGRAL VACUUM BREAKER, ACCESSIBLE SHUT OFF VALVE AT TOP OF WALL	PROVIDE W/ KEYS LOCK ON DOOR AND RECESSED BOX.
FPHB-1	FREEZE PROOF HOSE BIBB. BRONZE NICKEL PLATED 1/4 TURN HYDRANT 3/4" HOSE. STAINLESS STEEL BOX W/ 180° COVER OPENING.	J. R. SMITH 5509QT		WALL HYDRANT W/ INTEGRAL VACUUM BREAKER, STAINLESS STEEL BOX W/ KEYS LOCK AND KEYS VALVE	PROVIDE W/ KEYS LOCK ON DOOR AND KEYS VALVE. PROVIDE ACCESSIBLE ISOLATION VALVE ON SUPPLY PIPE.
FCO-1	FLOOR CLEAN OUT FOR CONCRETE	SMITH 4100		CAST IRON ADJUSTABLE CLEAN OUT W/ SATIN BRONZE COVER	SEE PLAN FOR SIZES.
TWCO-1	TWO WAY CLEANOUT TO GRADE SET IN CONCRETE SPEEDI SET DESIGN. NON TILT TRACTOR COVER	J. R. SMITH 4237		DUCO CAST IRON BODY, ROUND ADJUSTABLE SCORIATED CAST IRON TOP, TAPERED THREAD BRONZE PLUG.	SEE PLAN FOR SIZES.
TMV-1	THERMOSTATIC MIXING VALVE 1/2"	SYMMONS 5-120		BRONZE AND BRASS BODY. STAINLESS STEEL FLOW CONTROL, LOCKABLE HANDLE.	SET AT 98° PROVIDE AT ALL SINKS AND LAVATORIES ASSE 1070 OR CSA B125.3 COMPLIANT

PIPING MATERIALS SCHEDULE

SERVICE	MATERIAL
ABOVE GROUND DOMESTIC WATER	CPVC OR CROSS LINKED POLYETHYLENE (PEX) WHERE ALLOWED BY CODE. TYPE L HARD COPPER WITH WROUGHT COPPER FITTINGS AND 95-5 LEAD FREE SOLDER ONLY WHERE REQUIRED BY CODE.
UNDERGROUND WATER OUTSIDE	CPVC OR CROSS LINKED POLYETHYLENE (PEX) SLEEVED IN 4" PVC SCHED 40 PIPE WHERE ALLOWED BY CODE. 1" AND SMALLER: ASTM B88 TYPE L SOFT COPPER NO JOINTS OR FITTINGS UNDER SLAB. MAKE CONNECTIONS ABOVE SLAB WITH WROUGHT COPPER FITTINGS AND LEAD FREE SOLDER 1-1/4" AND LARGER: ASTM B88 TYPE L HARD COPPER WROUGHT COPPER FITTINGS MAKE JOINTS WITH SIL-FOS (15% AG).
UNDERGROUND WATER INSIDE	CPVC OR CROSS LINKED POLYETHYLENE (PEX) SLEEVED IN 4" PVC SCHED 40 PIPE. ALUMINUM COATED PEX EQUAL TO FOSTAPEX WHERE ALLOWED.
UNDERGROUND SANITARY SEWER AND VENT PIPING INSIDE BLDG AND OUTSIDE BLDG	PVC SCHEDULE 40 PIPE AND FITTINGS.
ABOVE GROUND SANITARY SEWER AND VENT	PVC SCHEDULE 40 PIPE AND FITTINGS EXCEPT IN PLENUM RETURN AREAS. COEX CELLCORE WHERE ALLOWED.
STORM DRAIN PIPING, ROOF DRAIN PIPING ABOVE GROUND	STANDARD WEIGHT CAST IRON "NO-HUB" PIPE AND FITTINGS. AND JOINTS OF STANDARD WEIGHT STAINLESS STEEL / NEOPRENE COUPLINGS.
STORM DRAIN PIPING UNDER GROUND	SCHEDULE 40 PVC PIPE AND FITTINGS

PLUMBING ROUGH-IN & MOUNTING HEIGHTS

FIXTURE	WASTE	VENT	COLD WATER	HOT WATER	INSTALLATION HEIGHT
WATER CLOSETS (FLUSH TANK)	3"	2"	1/2"	---	STANDARD 15" TO TOP OF SEAT HANDICAPPED 17" TO TOP OF SEAT
URINALS (FLUSH VALVE)	2"	1-1/2"	3/4"	---	STANDARD 22" TO TOP OF RIM HANDICAPPED 17" TO TOP OF RIM 44" MAX. TO FLUSH LEVER
LAVATORIES & SMALL SINKS	1-1/2"	1-1/4"	1/2"	1/2"	STANDARD 31" TO TOP OF RIM HANDICAPPED 34" TO TOP OF RIM
JANITOR'S SINKS	3"	1-1/2"	1/2"	1/2"	
HOSE BIBB	---	---	3/4"	---	18" ABOVE GRADE OUTSIDE, 18" A.F.F. INSIDE
UTILITY BOX	2"	1-1/2"	1/2"	1/2"	42" TO BOTTOM OF BOX.
SUPPLY BOX	---	---	1/2"	---	42" TO BOTTOM OF BOX.
HUB DRAIN	1-1/2"	1-1/4"	---	---	
BATHTUB	2"	2"	1/2"	1/2"	
SHOWER MIXING VALVES	---	1-1/2"	1/2"	1/2"	SHOWER HEAD 72" TO CENTERLINE OF HEAD MIXING VALVE HANDLE AT 48" A.F.F. (STANDARD AND ADA)

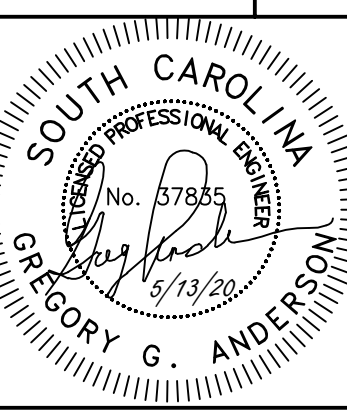
NOTES: VENT SIZES SHOWN ARE MINIMUM UNLESS SHOWN LARGER ON RISER DIAGRAMS. SIZES SHOWN FOR WASTE ARE FOR RISERS ONLY. ALL DRAIN AND VENT LINES BELOW SLAB SHALL BE 2" OR LARGER.

PLUMBING INSULATION SCHEDULE

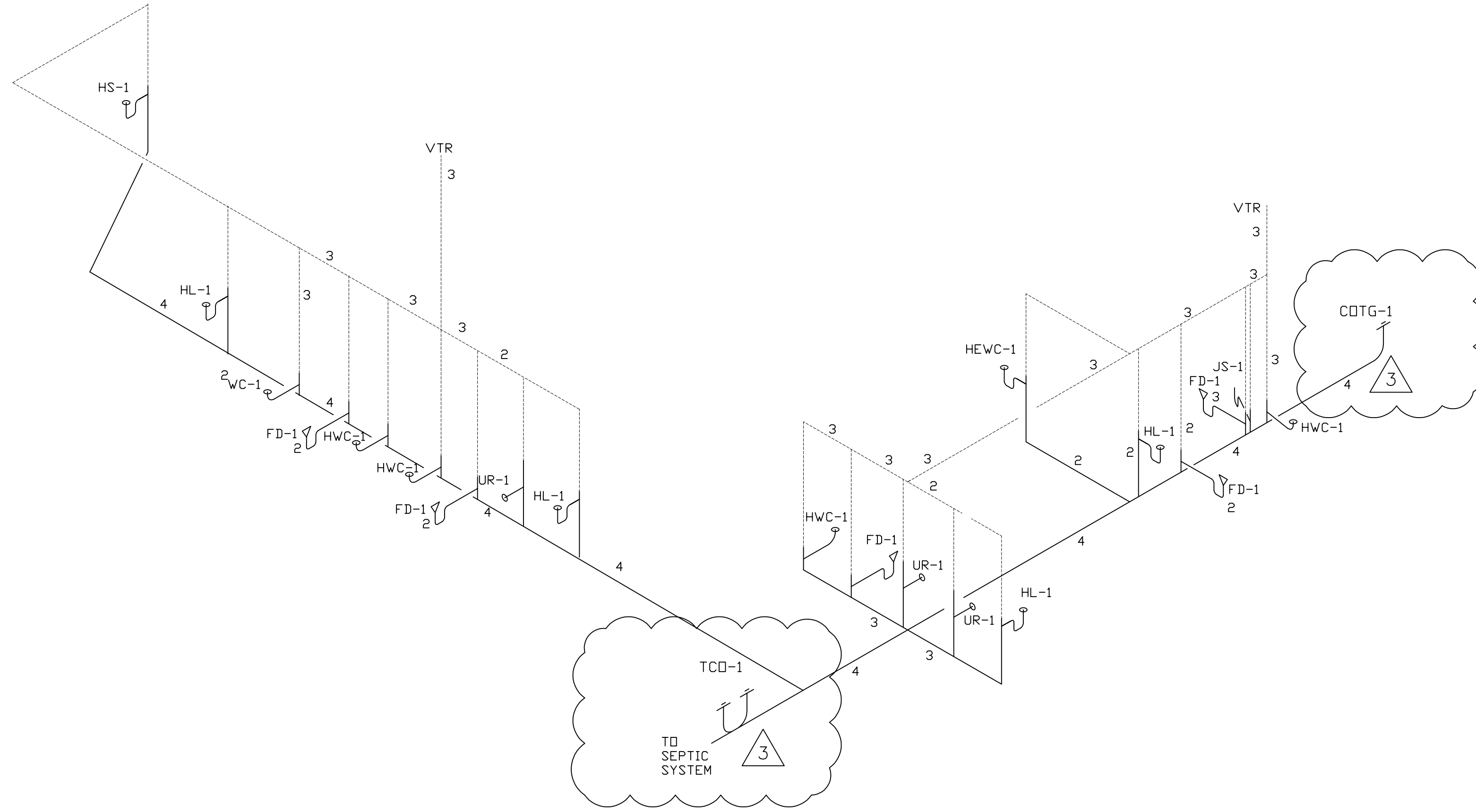
DESCRIPTION	INSULATION TYPE	THICKNESS
DOMESTIC COLD AND HOT WATER PIPING ABOVE OR BELOW GRADE. MINIMUM R-VALUE OF 2	ELASTOMERIC (FIRE RATED IN PLENUMS) MASTIC COATING UNDERGROUND	1/2"
WATER COOLERS TRAPS, TAILPIECES, HANDICAPPED LAVATORY TRAPS, AND HOT WATER SUPPLIES.	ANTIMICROBIAL VINYL EQUAL TO TRUEBRO BRAND LAV-GUARD	1/8"
ROOF DRAIN PIPING ABOVE CEILING	FIBERGLASS ASJ	1/2"

#	DATE	COMMENTS
1	08/11/20	CIVIL AND PLAN MODIFICATIONS
2	09/02/20	ADD SECURITY CAMERAS ON SITE
3	11/04/20	PLUMBING COORDINATION

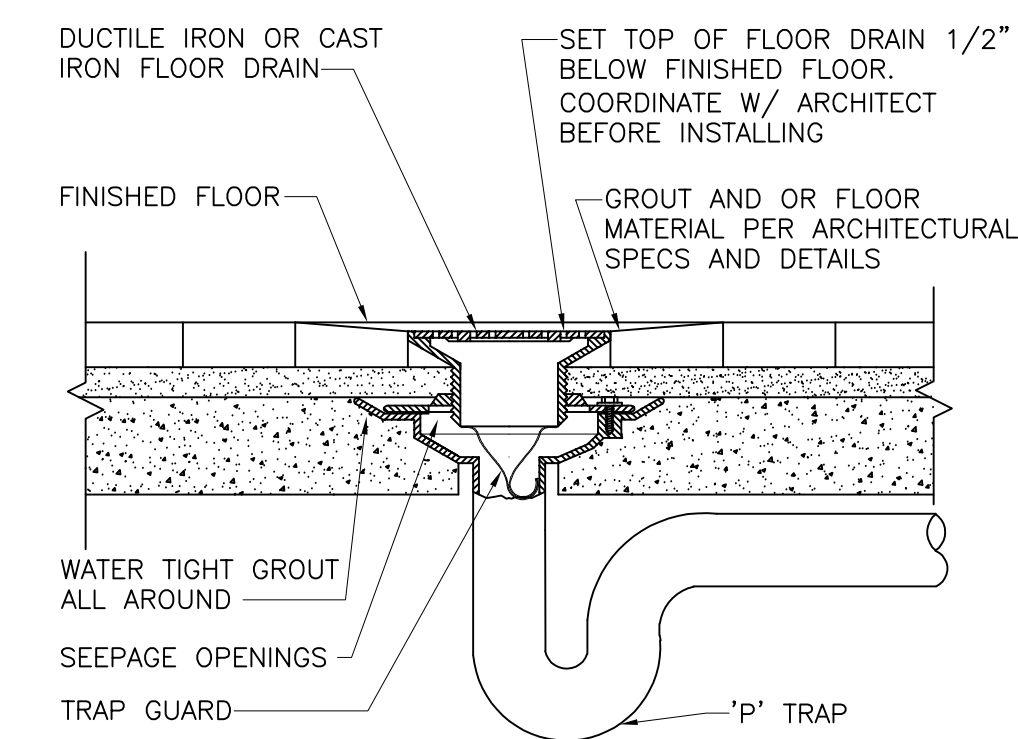
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 Lexington, South Carolina 29073
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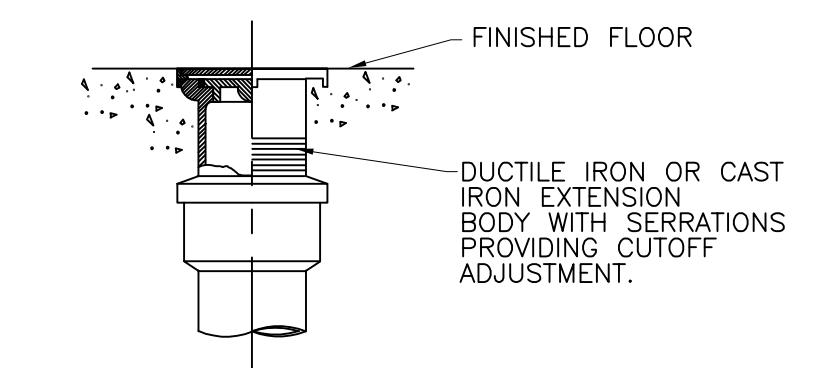
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 DATE: 05/13/20 JOB NO. 2020-09
 SHEET: **P2.2**



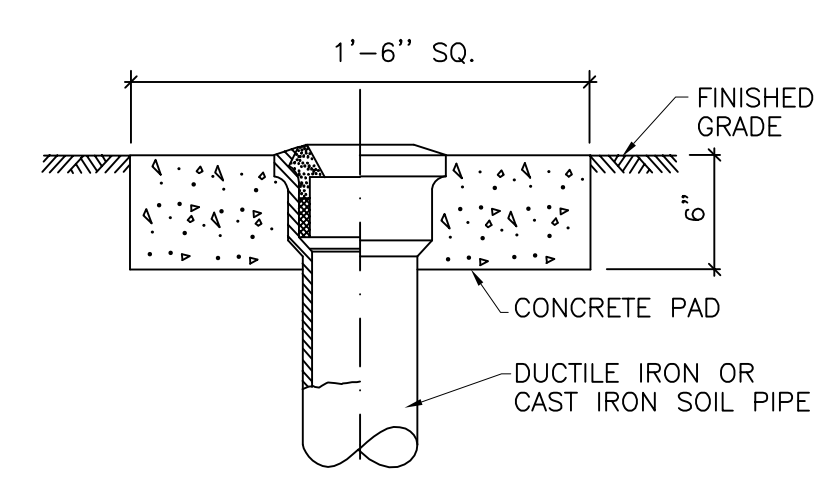
B ISOMETRIC DRAIN DETAIL- BUYERS OFFICE
 NTS



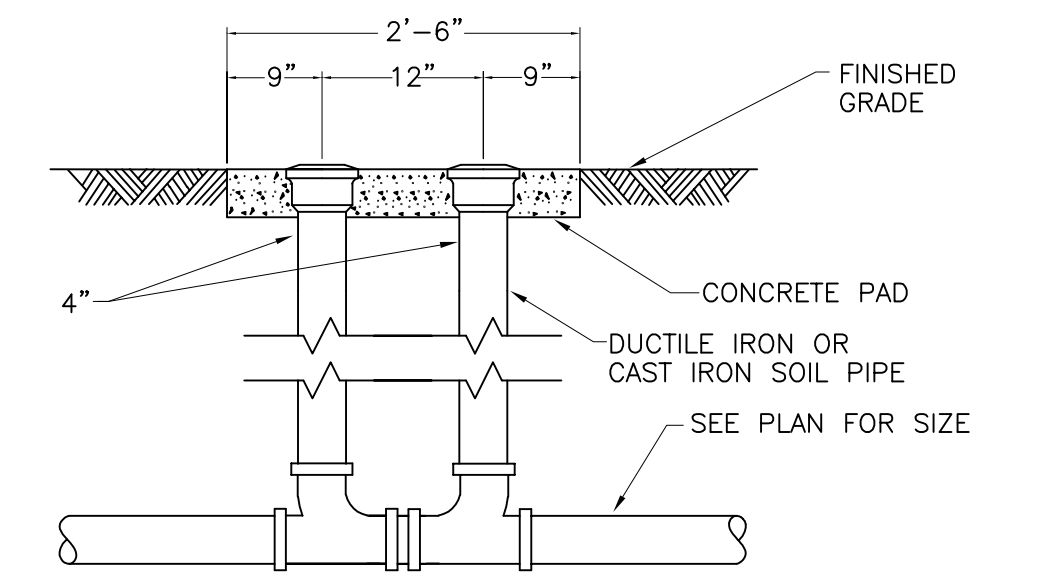
G FLOOR DRAIN AT SLAB
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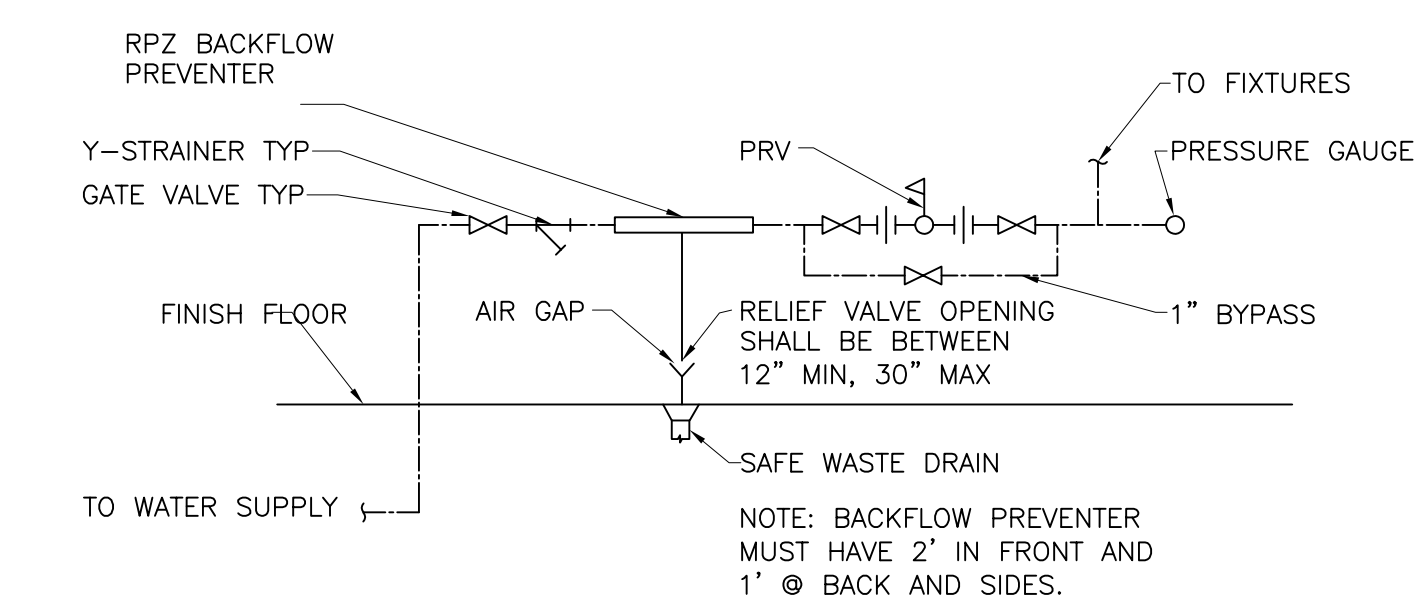
E FLOOR CLEANOUT
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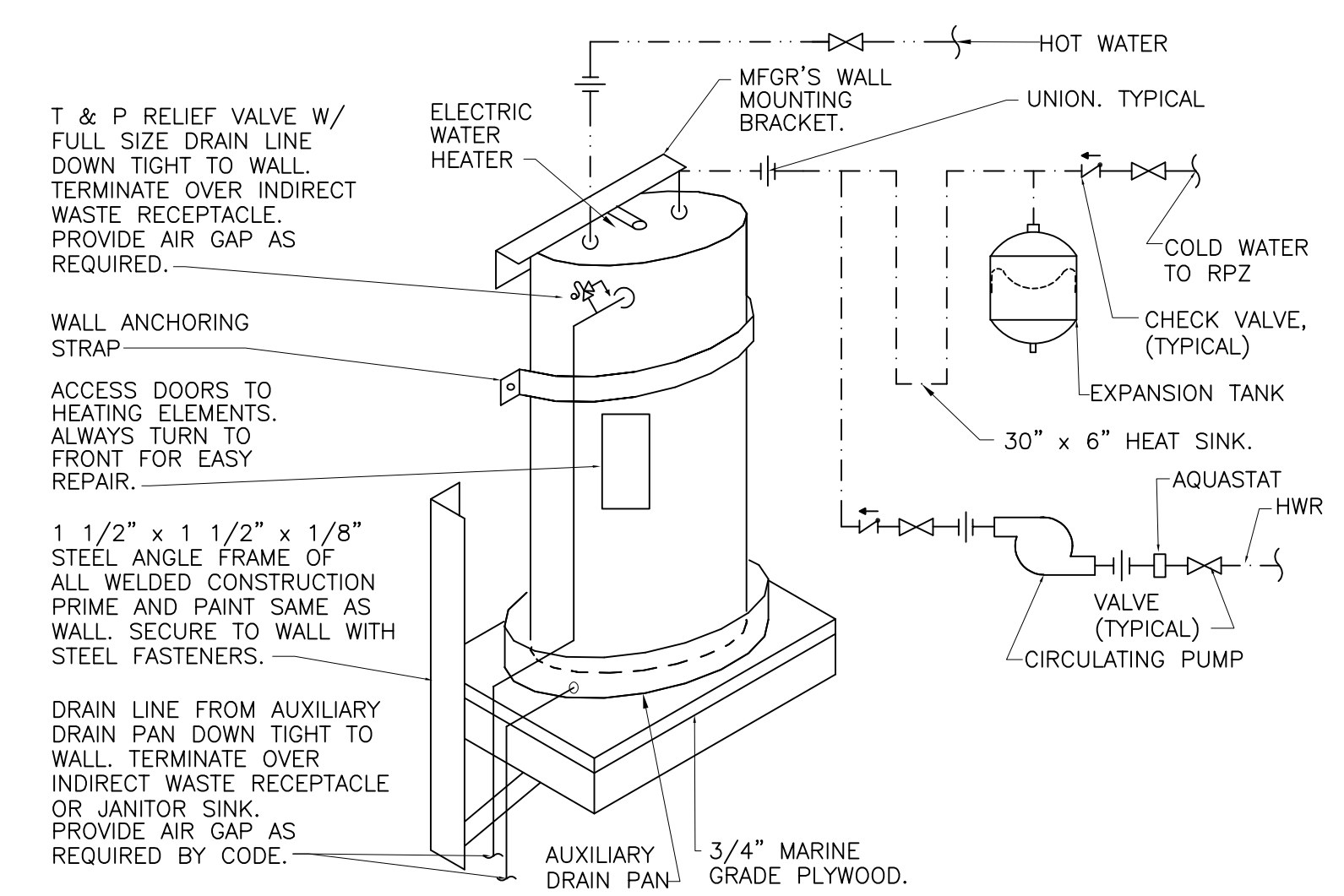
F CLEANOUT TO GRADE
 N.T.S.



D DOUBLE CLEANOUT TO GRADE
 N.T.S.



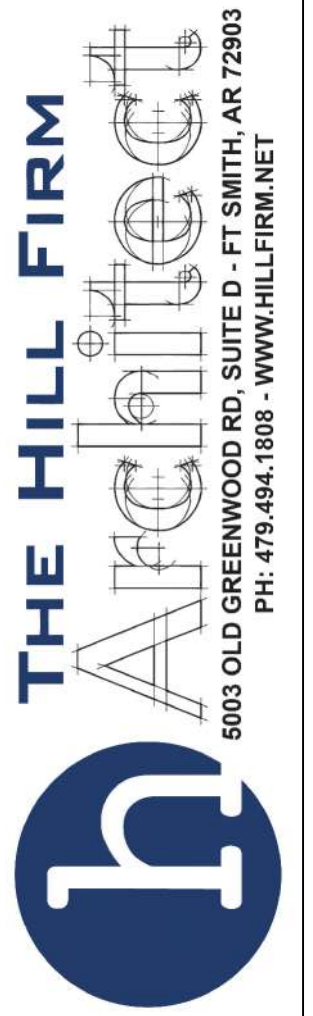
J BACKFLOW PREVENTER DETAIL
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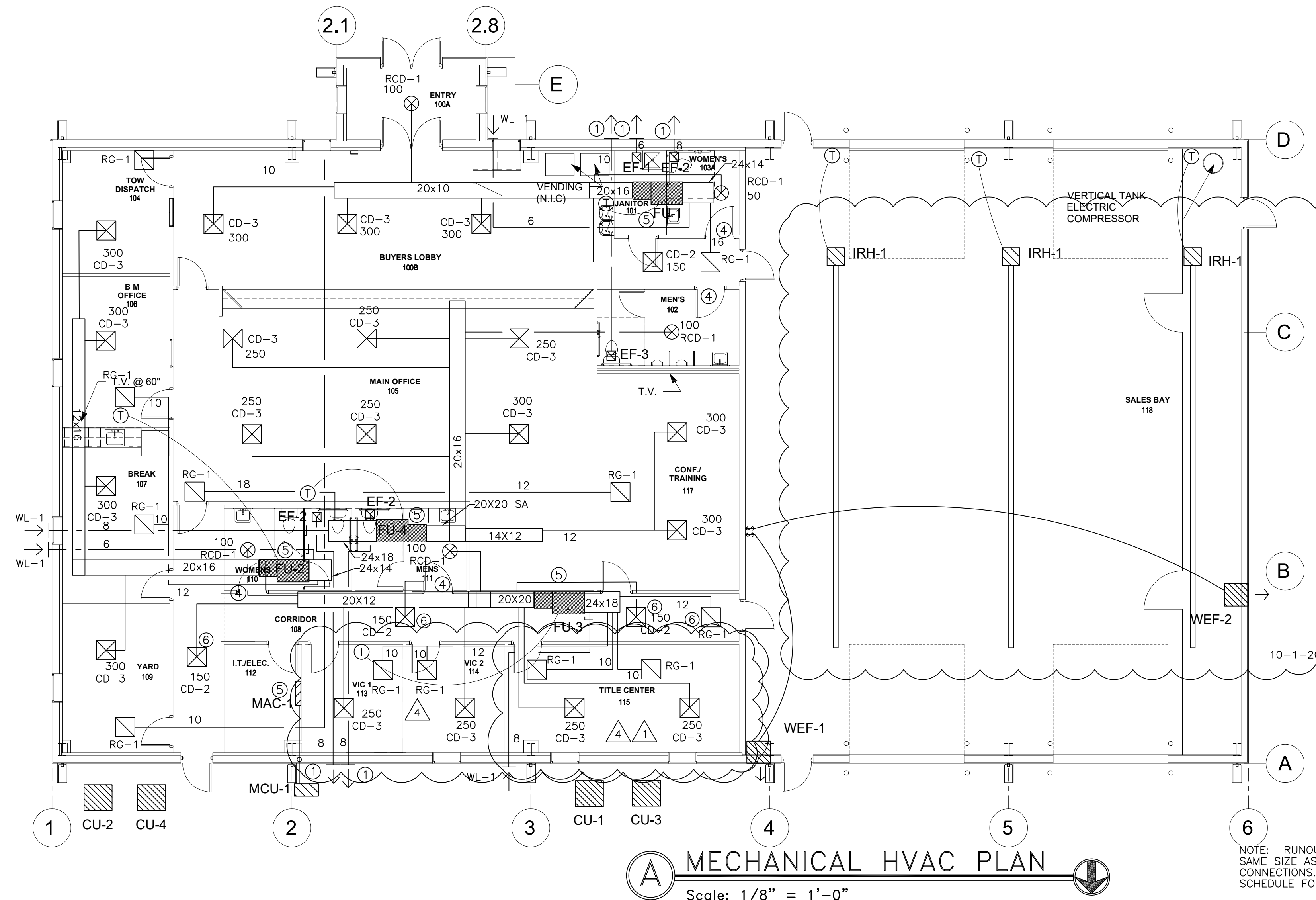
H ELECTRIC WATER HEATER DETAIL
 N.T.S.
 WITH CIRCULATING PUMP



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 PROJECT # 20006



5803 OLD GREENWOOD RD. SUITE D - FT SMITH, AR 72903
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A MECHANICAL HVAC PLAN
 Scale: 1/8" = 1'-0"

NOTE: RUNOUT DUCTS TO GRILLES ARE THE SAME SIZE AS THE GRILL NECK CONNECTIONS. SEE THE AIR DEVICE SCHEDULE FOR SIZES.

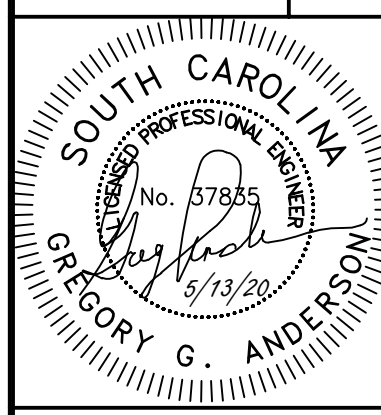
KEYED NOTES

- ① EXHAUST DUCT OUT THRU WALL. PROVIDE FAN MFGR'S WALL CAP TO MATCH WALL TYPE.
- ② ROUTE REFRIG PIPING FROM MAC TO ASSOCIATED MCU. PIPE COND DRAIN OUTSIDE TO GRASSY AREA AND TURN DOWN.
- ③ PROVIDE FAN MFGR'S WALL VENT TO MATCH WALL TYPE.
- ④ UNDERCUT DOOR 1" TO ALLOW RA FLOW WHEN CLOSED.
- ⑤ ROUTE CONDENSATE DRAIN TO JANITOR SINK OR NEARBY HUB DRAIN ABOVE CEILING IF ALLOWED BY AHJ. COORDINATE HUB DRAIN LOCATIONS WITH PLUMBING CONTRACTOR. IF CONDENSATE DRAINS ARE NOT ALLOWED TO GO TO SANITARY SEWER RUN DRAINS OUT TO GRASSY AREA AND TURN DOWN.
- ⑥ 1 HOUR FIRE RATED UPPER CEILING. PROVIDE 1 HR FIRE DAMPER IN SLEEVE AT UPPER CEILING FIRE RATED ASSEMBLY PER AHJ REQUIREMENTS. SEE DETAIL B/M 2.01

MECHANICAL LEGEND		
DUCT (1ST FIGURE, SIDE SHOWN; 2ND FIGURE, SIDE NOT SHOWN)		VOLUME DAMPER MANUAL OPERATION
DUCT RISER 1ST DIMENSION SIDE POINTED TO		TURNING VANES
MECHANICAL EQUIPMENT		COOLING CONDENSATE DRAIN
CEILING DIFFUSER		TRANSITION FROM SQUARE TO ROUND
RETURN GRILLE		THERMOSTAT MOUNT AT 48" AFF
EXHAUST GRILLE		NEW
DUCT SECTION (SUPPLY)		DOWNWARD SLOPE
DUCT SECTION (RETURN)		DUCT MOUNTED SMOKE DETECTOR
DUCT SECTION (EXHAUST)		AIR FLOW ARROW
		1 HOUR FIRE DAMPER

#	DATE	COMMENTS
1	08/11/20	CIVIL AND PLAN MODIFICATIONS
2	09/02/20	ADD SECURITY CAMERAS ON SITE
3	11/04/20	PLUMBING COORDINATION
4	02/05/21	PLAN MODIFICATIONS

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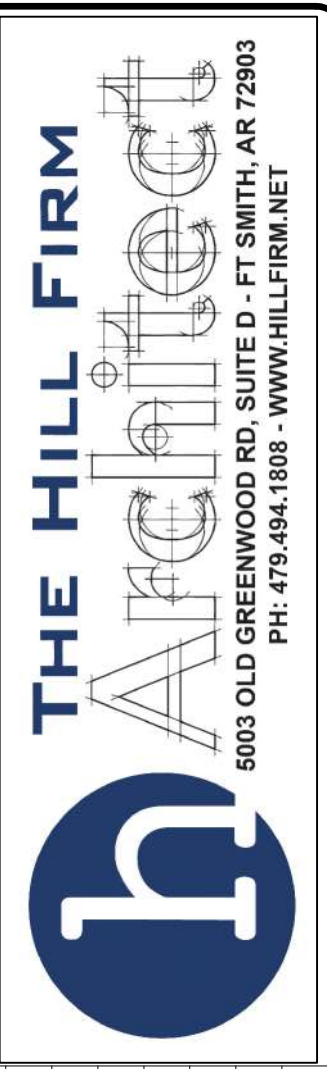


MECHANICAL PLAN
 DATE: 05/13/20 JOB NO. 2020-09
 SHEET:

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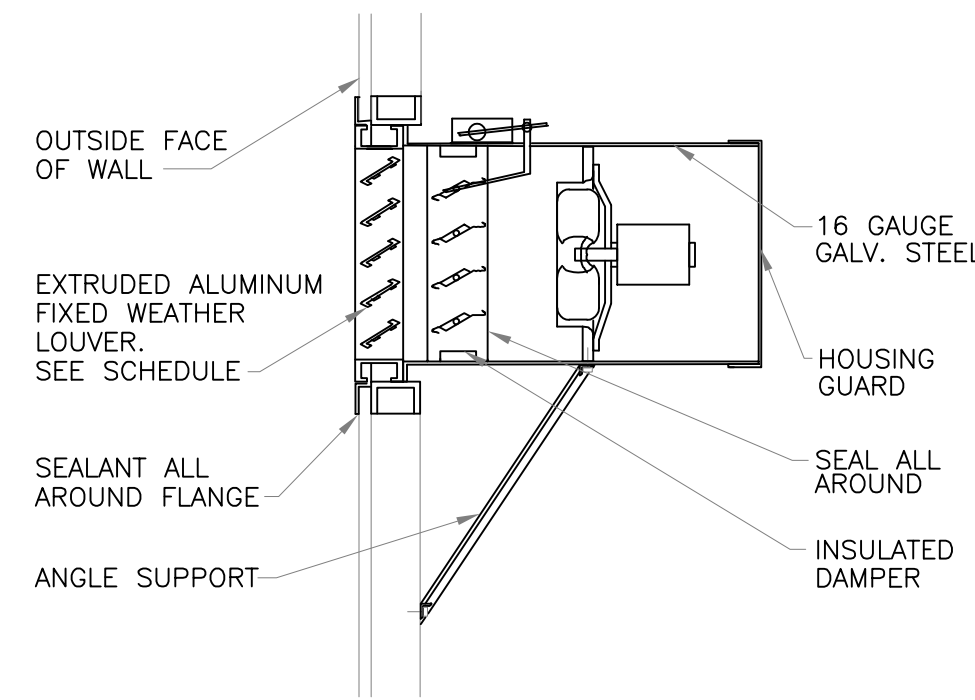
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 PROJECT # 20006



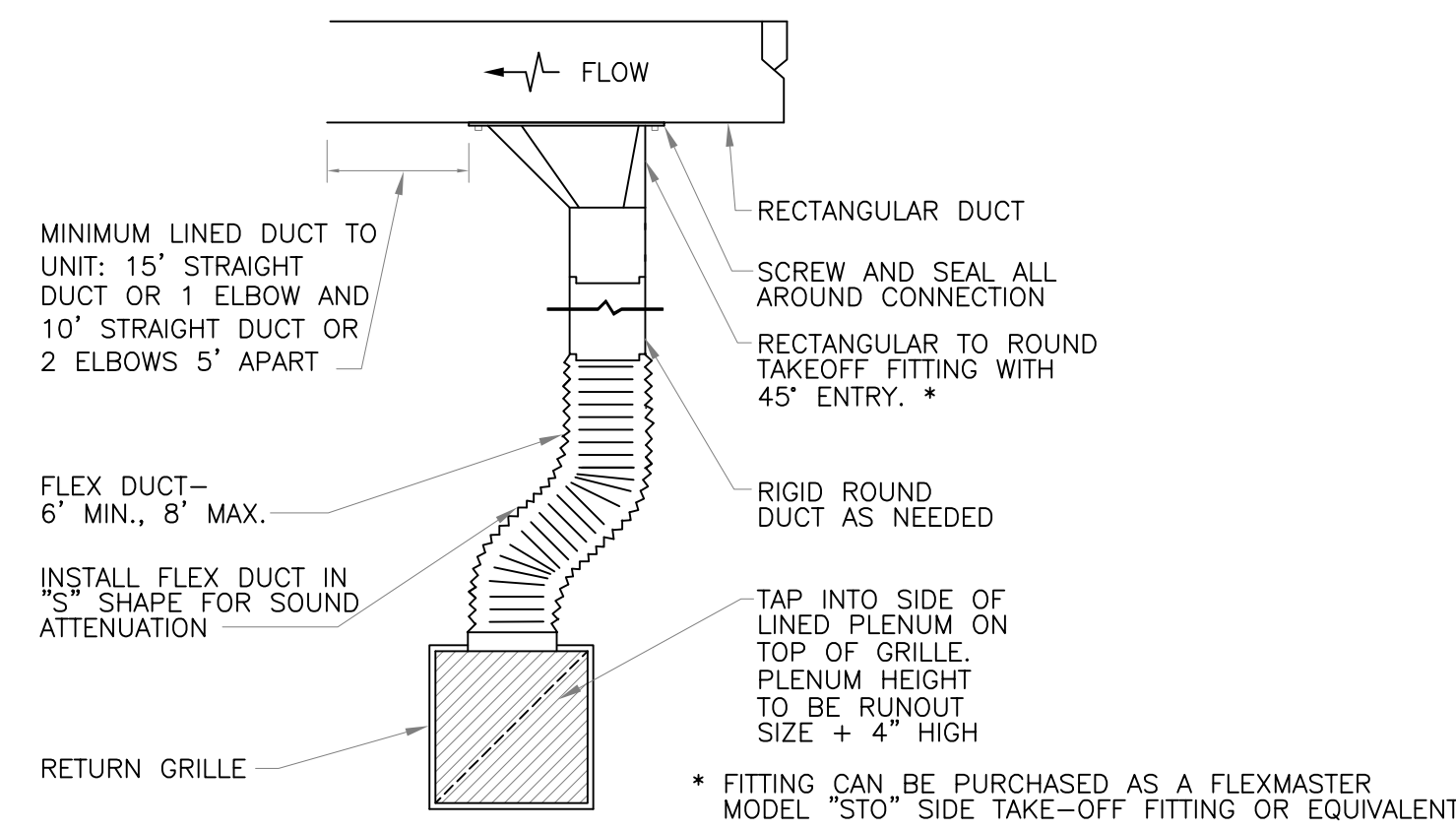
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GENERAL NOTES

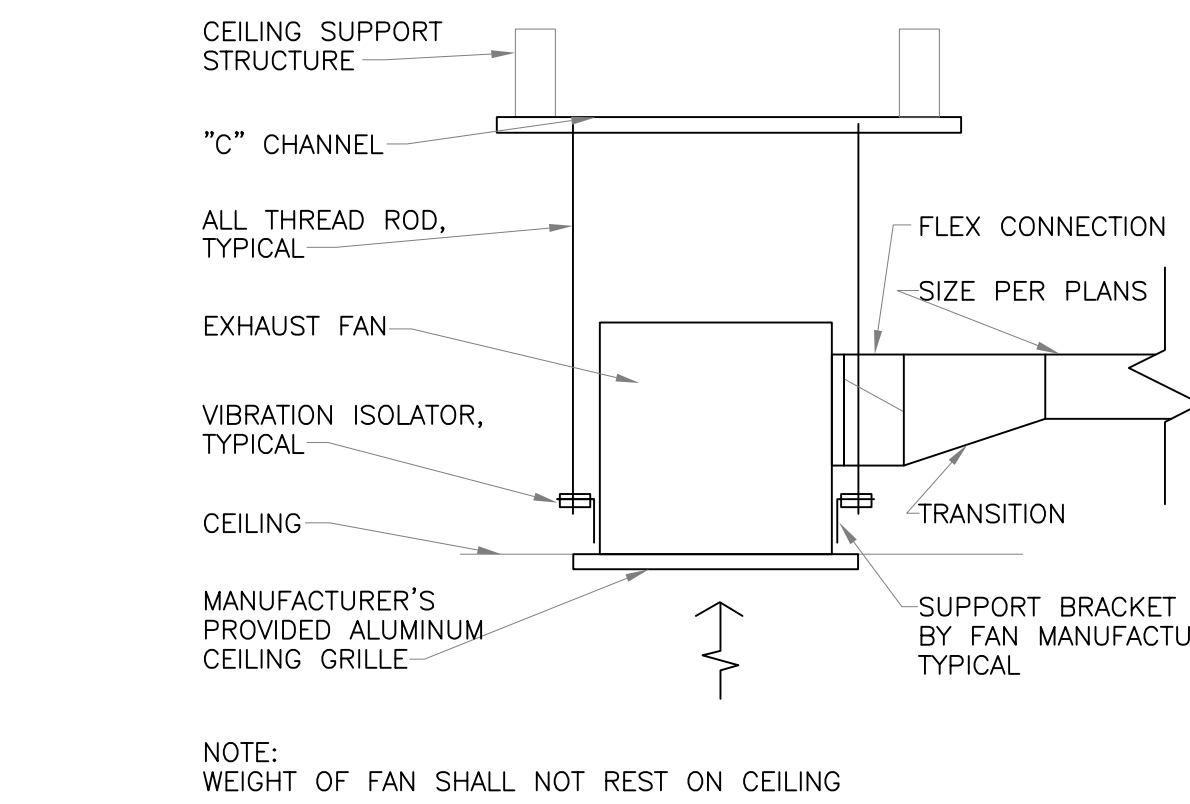
- SUBMISSION OF PROPOSAL IN CONNECTION WITH THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE UNDER WHICH HE WILL BE OBLIGATED TO OPERATE SHOULD HE BE AWARDED THE WORK UNDER THIS CONTRACT. NO EXTRA CHARGE WILL BE ALLOWED FOR FAILURE OF ANY BIDDER TO EXAMINE THE SITE PRIOR TO BID.
- ALL WORK SHALL CONFORM TO STATE AND LOCAL CODES, RULES, REGULATIONS, AND ORDINANCES, ANY AND ALL OF WHICH SHALL TAKE PRECEDENCE OVER THE PLANS IF CONFLICTS EXIST BETWEEN THEM.
- COORDINATE ALL WORK WITH THE OWNER AND ALL OTHER CONTRACTORS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RIGGING, HANDLING, AND PROTECTION OF MATERIALS. PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT AND TRANSFER TO POINT OF INSTALLATION OF ANY FURNISHED ITEMS.
- IN CASES OF EQUIPMENT SUBSTITUTION, CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT ALL SYSTEMS AND COMPONENTS WILL FIT PROPERLY PRIOR TO FABRICATION OR ORDERING. INSTALLED DUCTS MAY BE RESIZED BY THE CONTRACTOR TO FIT FIELD CONDITIONS. INSTALLED DUCTS SHALL HAVE EQUAL FRICTION LOSS TO THOSE SHOWN. RECTANGULAR DUCTS SHALL NOT BE CHANGED TO ROUND DUCTS. PROVIDE COMPLETE SHEET METAL SHOP DRAWINGS TO ENGINEER SHOWING ACTUAL DUCT SIZES, ARRANGEMENTS, AND UNIT LOCATION TO BE INSTALLED. THIS SHALL BE DONE PRIOR TO FABRICATION OR INSTALLATION.
- ALL DUCT SIZES SHOWN ARE THE METAL DIMENSIONS. ALLOWANCES HAVE BEEN MADE FOR THE LINER WHERE APPLICABLE IN THE RECTANGULAR DUCTS. AT DUAL WALL DUCTS, THE DIMENSION SHOWN IS THE OUTSIDE METAL DUCT SIZE.
- ALL DIMENSIONS AND SIZES IN INCHES UNLESS OTHERWISE NOTED.
- THE DRAWINGS INDICATE THE GENERAL LAYOUT REQUIREMENTS FOR EQUIPMENT, FIXTURES, PIPING, DUCTWORK, ETC. FINAL LAYOUT SHALL BE GOVERNED BY ACTUAL FIELD CONDITIONS WITH ALL MEASUREMENTS VERIFIED AT THE SITE.
- THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATING MECHANICAL SYSTEM, INCLUDING ALL INCIDENTAL ITEMS AND CONNECTIONS NECESSARY FOR PROPER OPERATION OR CUSTOMARILY INCLUDED, EVEN THOUGH EACH AND EVERY ITEM MAY NOT BE INDICATED. THE MECHANICAL INSTALLATION SHALL BE SAFE, RELIABLE, ENERGY EFFICIENT AND EASILY MAINTAINED WITH ADEQUATE PROVISIONS ALLOWED FOR ACCESS TO EQUIPMENT.
- THE MECHANICAL SYSTEM SHALL OPERATE QUIETLY WITH NOISE LEVELS BELOW THE CRITERIA RECOMMENDED FOR THE APPLICATION BY ASHRAE. PROVIDE CORRECTIVE ACTION AS REQUIRED TO REDUCE OBJECTIONABLE NOISE OR VIBRATION.
- INSTALL REFRIGERANT PIPING FROM CONDENSING UNITS TO ASSOCIATED AIR HANDLERS. SIZE PER MANUFACTURER'S RECOMMENDATION.
- USE ELBOW TAKE-OFF FITTINGS AT ALL ROUND SUPPLY BRANCH TAKE-OFFS.
- USE FLEX DUCTS FROM TAKEOFF TO SUPPLY OUTLET AND LIMIT LENGTHS IF REQUIRED BY LOCAL CODE OR ORDINANCE.
- PROVIDE FIRE DAMPERS AT ALL FIRE-RATED WALLS AND FLOOR PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE BARRIER LOCATIONS.
- UNDERCUT DOORS 3/4 INCH WHERE NO RETURN IS PROVIDED IN AN ENCLOSED SPACE, EXCEPT AT FIREDOORS.
- PROVIDE AN INSULATED BACK ON ALL THERMOSTATS.
- COORDINATE ALL AIR DEVICES WITH CEILINGS AND CEILING ITEMS.
- ROUTE DUCTWORK AS HIGH AS POSSIBLE IN CEILING SPACE. COORDINATE DUCTWORK WITH LIGHTS AND STRUCTURE.
- CONTRACTOR SHALL NOT INSTALL ANY MAINTENANCE ITEMS ABOVE HARD CEILINGS. THIS SHALL INCLUDE VALVES, DAMPERS, OR ANY OTHER ITEMS THAT REQUIRE ACCESS AFTER CONSTRUCTION IS COMPLETED. IF INSTALLATION OF THESE ITEMS ABOVE A HARD CEILING CANNOT BE AVOIDED, THEN PROVIDE CEILING ACCESS DOORS EQUAL TO ACUDOR MODEL 5000 WHERE REQUIRED TO GAIN ACCESS TO EQUIPMENT, DAMPERS, VALVES, CONTROL COMPONENTS, OR ANY OTHER DEVICE WHICH MAY REQUIRE ACCESS AFTER CONSTRUCTION IS COMPLETE. AT FIRE RATED WALLS, USE ACUDOR MODEL FW5050. MINIMUM SIZE SHALL BE 12"x12". USE 18"x18" WHEN PERSONNEL ACCESS IS REQUIRED.
- COORDINATE ALL DUCTWORK AND AIR DEVICES WITH FIRE SPRINKLER CONTRACTOR PRIOR TO FABRICATION, PURCHASE, OR INSTALLATION.
- AT ALL ABOVE CEILING FAN COIL UNITS, PROVIDE FLOAT SWITCH TO DE-ENERGIZE SYSTEM IN THE EVENT OF CONDENSATE BACKUP. PROVIDE 3/4" PVC CONDENSATE DRAIN FROM FAN COIL UNITS TO HUB DRAIN AT WATER HEATER CLOSETS. CONFIRM WITH LOCAL AUTHORITY THAT DISCHARGE OF CONDENSATE DRAIN INTO SEWER SYSTEM IS ACCEPTABLE. IF NOT, DISCHARGE ALL CONDENSATE DRAINS INTO STORM DRAIN SYSTEM.
- PROVIDE LINT TRAPS AT ALL DRYERS.



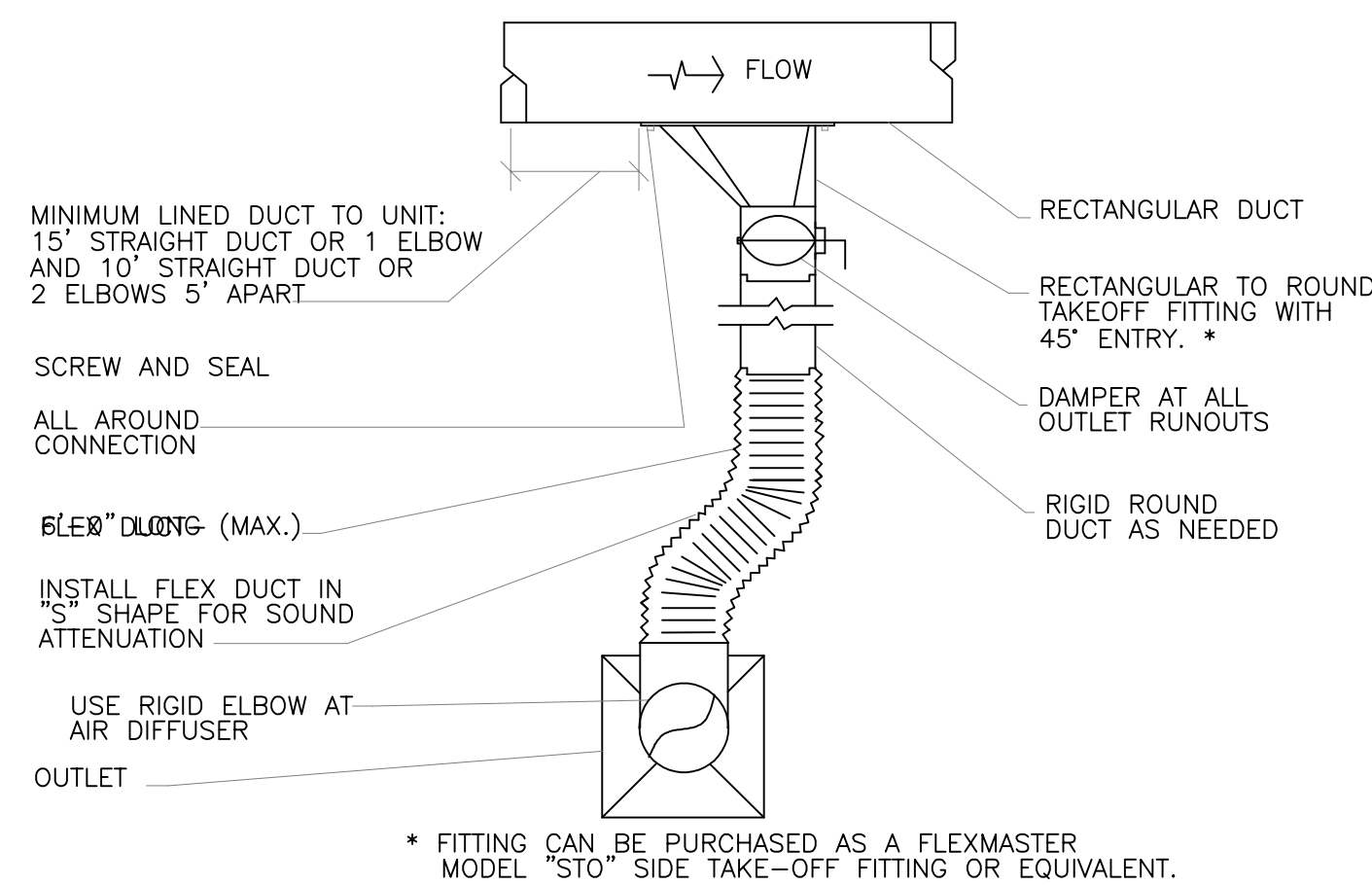
G DIRECT DRIVE WALL FAN
 SCALE: N.T.S.



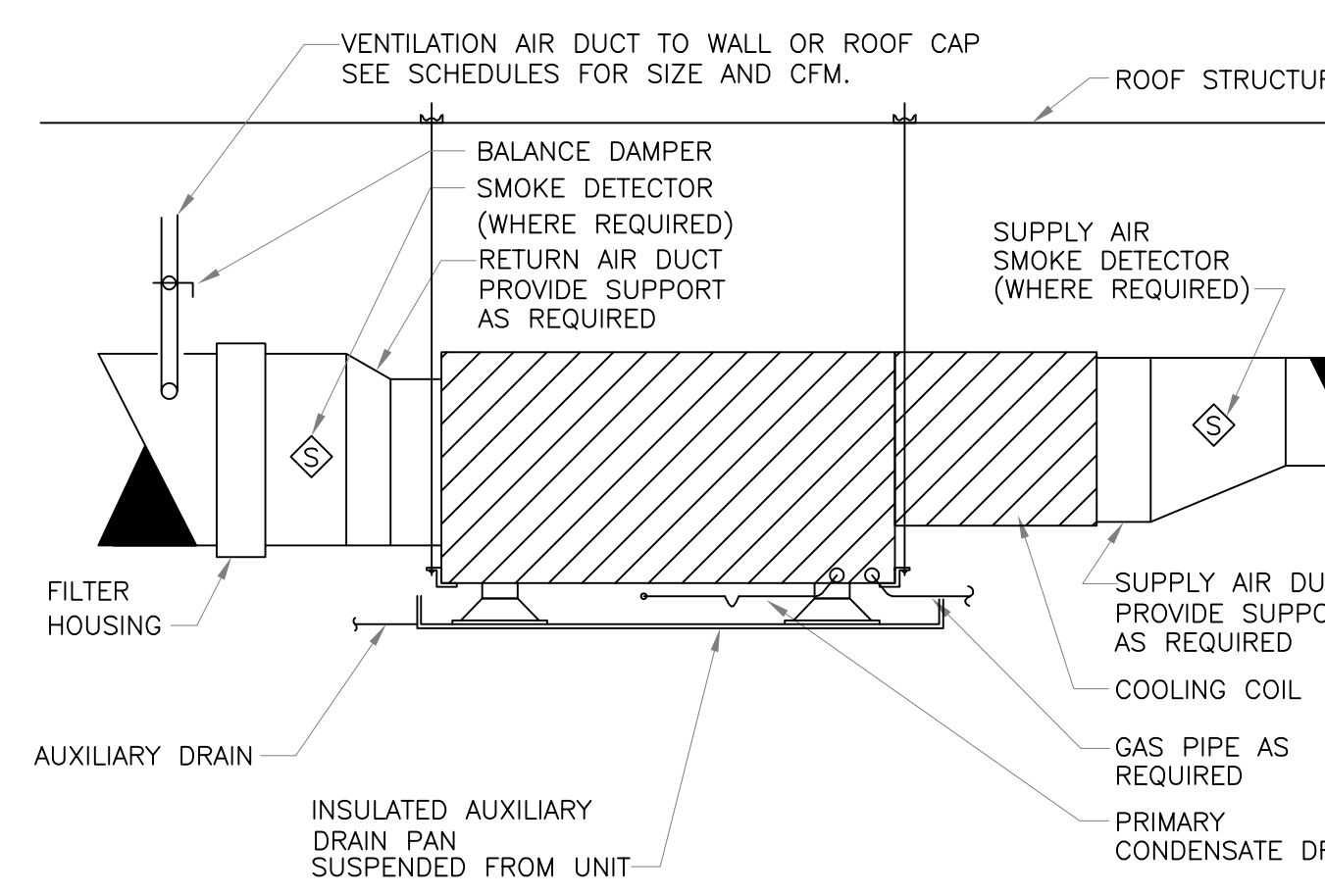
E RETURN AIR DUCT RUNOUT
 SCALE: N.T.S.



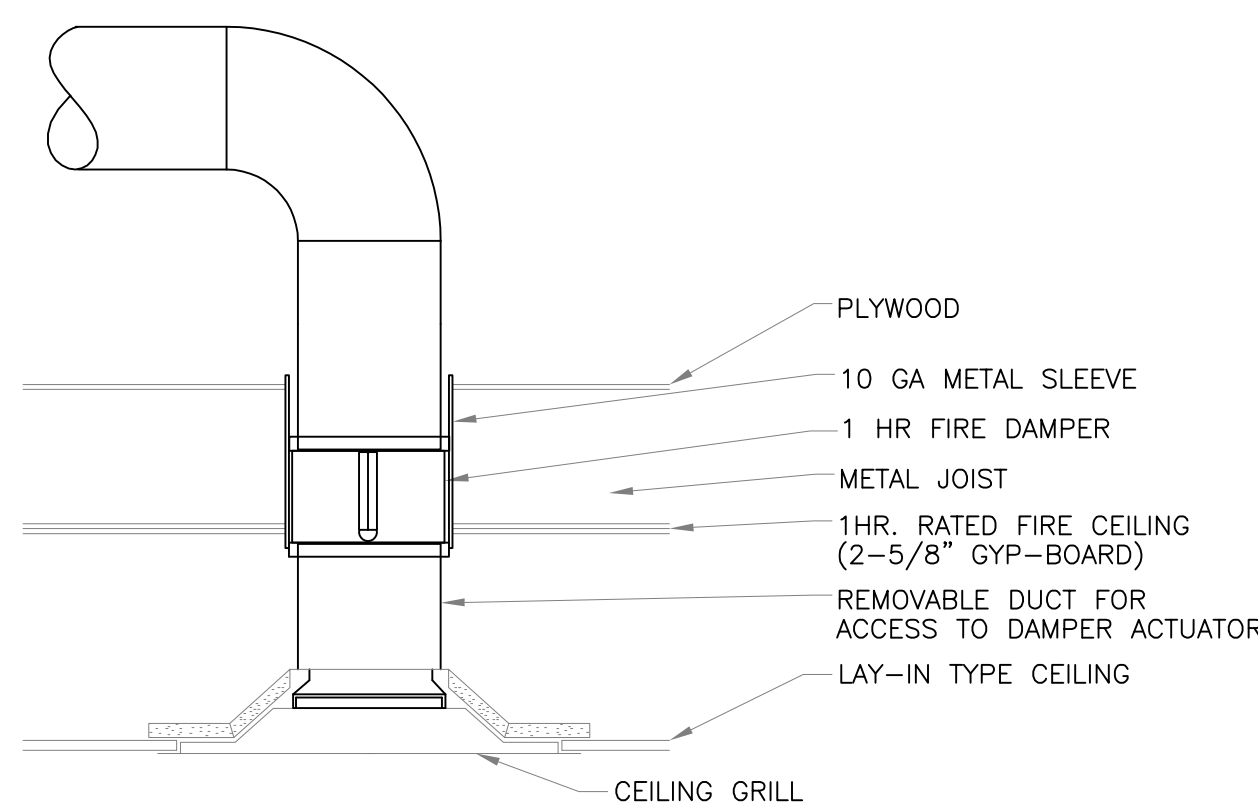
B CEILING MOUNTED CABINET FAN
 SCALE: N.T.S.



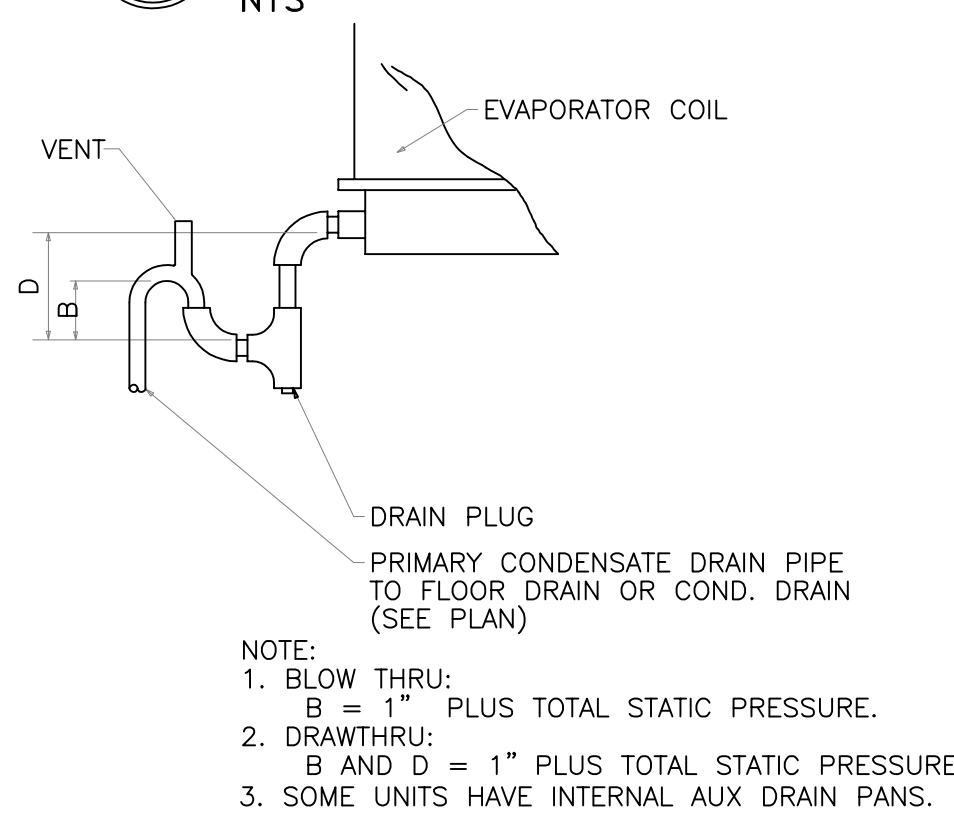
D LOW PRESSURE DUCT RUNOUT
 N.T.S.



A HORIZONTAL FURNACE MOUNTING
 SCALE: N.T.S.



F FIRE DAMPER AT RATED ASSEMBLY
 SCALE: N.T.S.

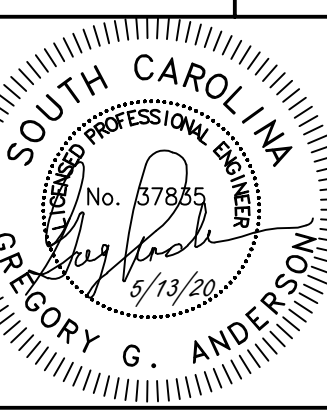


C DRAIN PAN TRAP
 N.T.S.

MECHANICAL LEGEND			
DUCT (1ST FIGURE, SIDE SHOWN; 2ND FIGURE, SIDE NOT SHOWN)		VOLUME DAMPER MANUAL OPERATION	
DUCT RISER 1ST DIMENSION SIDE POINTED TO		TURNING VANES	
MECHANICAL EQUIPMENT		COOLING CONDENSATE DRAIN	
CEILING DIFFUSER		TRANSITION FROM SQUARE TO ROUND	
RETURN GRILLE		THERMOSTAT MOUNT AT 48\"/>	
EXHAUST GRILLE		NEW	
DUCT SECTION (SUPPLY)		DOWNWARD SLOPE	
DUCT SECTION (RETURN)		DUCT MOUNTED SMOKE DETECTOR	
DUCT SECTION (EXHAUST)		AIR FLOW ARROW	
		1 HOUR FIRE DAMPER	

#	DATE	COMMENTS
1		

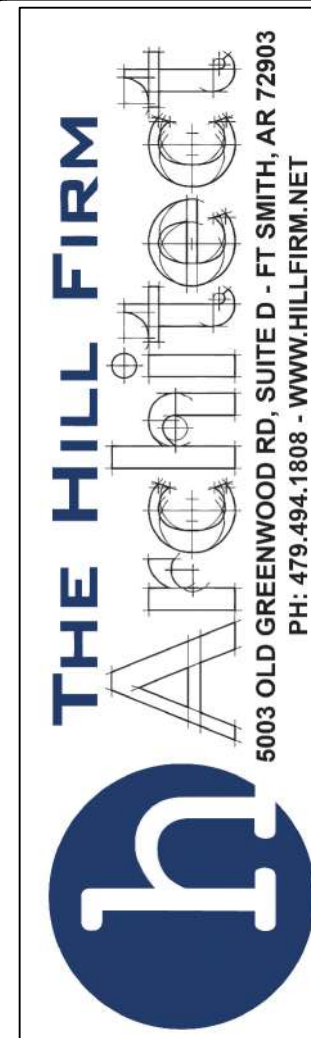
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MECHANICAL NOTES AND DETAILS
 DATE: 05/13/20 JOB NO. 2020-09
 SHEET: **M2.1**



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FAN SCHEDULE

MARK	DESCRIPTION	MFR., MODEL	DRIVE TYPE	AREA SERVED	CFM, SP	TS, FRPM	HP/W	VOLTS/PH	SONES	CONTROL TYPE	REMARKS
EF-1	EXHAUST FAN CEILING CABINET	GREENHECK SPA-125	DIRECT	SEE PLANS	100 .25	1100	21 W	120V/1PH	1.5	SEE PLANS	a, c, e, j
EF-2	EXHAUST FAN CEILING CABINET	GREENHECK SPA-200	DIRECT	SEE PLANS	200 .25	900	55 W	120V/1PH	2.5	SEE PLANS	a, c, e, j
EF-3	EXHAUST FAN CEILING CABINET	GREENHECK SPA-390	DIRECT	SEE PLANS	300 .25	1350	135 W	120V/1PH	4.5	SEE PLANS	a, c, e, j
WEF-1	WALL-MOUNTED EXHAUST FAN PROPELLER PACKAGED AIRFOIL	GREENHECK SE1-20	DIRECT	SEE PLANS	2000 .25	860	1/4 HP	120V/1PH	6.7	SEPARATE SWITCH	a,d,e,g,h,n

GENERAL REQUIREMENTS - ALL FANS

- PROVIDE PREWIRED FACTORY MOUNTED INTEGRAL DISCONNECT DEVICE (NEMA 3R FOR EXTERIOR).
- PROVIDE PREWIRED VARIABLE SPEED CONTROLLER ON DIRECT DRIVE FANS.

FAN ACCESSORIES LEGEND

a. FACTORY-MOUNTED DISCONNECT SWITCH	f. ROOF CURB TO MATCH ROOF TYPE AND SLOPE
b. NEMA 3R DISCONNECT SWITCH	g. WALL SLEEVE
c. BACKDRAFT DAMPER	h. WIRE GUARD
d. BIRD SCREEN	i. WEATHER HOOD
e. VARIABLE SPEED CONTROLLER	j. MANUFACTURER'S WALL CAP
k. INTAKE EXTENSION	
l. MANUFACTURER'S WHITE ALUMINUM GRILLE	
m. MOTOR-OPERATED DAMPER W/ 120 V ACTUATOR AND FAN START TIME DELAY CONTROLS.	
n. PREFINISHED WEATHERPROOF LOUVERS	
o. PROVIDE METAL LOCKING COVERS OVER FAN SWITCHES.	

MECHANICAL PIPING SCHEDULE

SERVICE	PIPING TYPE
EQUIPMENT DRAINS, OVERFLOWS	TYPE "L" HARD COPPER

MECHANICAL DUCTWORK SCHEDULE

SERVICE	DUCT TYPE
RESTROOM EXHAUST DUCTS, 1ST 10' FROM EXHAUST GRILLE	RECTANGULAR W/ ACOUSTIC LINER
RESTROOM EXHAUST DUCTS, BEYOND 10' FROM EXHAUST GRILLE	ROUND WRAPPED, OR RECTANGULAR LINED, AS INDICATED ON THE PLANS
ALL LOW PRESSURE SUPPLY AND RETURN AIR RECTANGULAR DUCTS.	RECTANGULAR W/ ACOUSTIC LINER
ALL ROUND RUNOUTS TO SUPPLY DIFFUSERS AND RETURN GRILLES CONCEALED ABOVE CEILINGS.	ROUND DUCT WITH INSULATION WRAP PER INSULATION SCHEDULE. PROVIDE 6-8" FLEX DUCT AT OUTLET CONNECTIONS PER DETAILS AND NOTES ON PLANS.
COMMERCIAL KITCHEN EXHAUST DUCTS.	GREASE DUCT- 16 GAUGE, CARBON STEEL WELDED AIR TIGHT AT ALL JOINTS AND SEAMS. MECHANICAL FASTENERS SHALL NOT PENETRATE DUCT WALLS.
COMBUSTION AIR SUPPLY DUCTS	ROUND OR RECTANGULAR WITH INSULATION WRAP.

NOTE:
 1. PROVIDE SPIRAL OVAL DUCTS IN PLACE OF ROUND SPIRAL WHERE SHOWN ON PLANS OR AS REQUIRED DUE TO LIMITED SPACE.

GAS INFRA RED HEATER SCHEDULE

MARK	DESCRIPTION	MFR./MODEL	HEATING INPUT	HEATING OUTPUT	EFF	CFM	ELECTRICAL AMPS	MOCVP	V/A	PHASE	CONTROL TYPE	ACCESSORIES
IRH-1	INFRARED HEATER GAS BLOWER TYPE SEALED COMB. PROPANE	AMBI-RAD VPLUSHL80-GX-S30	80 MBH	- MBH	80%	-	-	-	120	1	SHIELDED T-STAT	ELECTRONIC IGNITION, POWER DRAFTER 45 DEGREE DISCHARGE ANGLE 50" STAINLESS STEEL HEAT EXCHANGER TUBE

AIR DEVICE SCHEDULE

MARK	DESCRIPTION	MFR., MODEL	SIZE	NECK*	MATERIAL, FINISH	COMMENTS
CD-1	CEILING DIFFUSER LOUVER FACE	TITUS TDC	22x22 FACE 24x24 FRAME	6"	STEEL, WHITE	LAY-IN; UP TO 110 CFM
CD-2	CEILING DIFFUSER LOUVER FACE	TITUS TDC	22x22 FACE 24x24 FRAME	8"	STEEL, WHITE	LAY-IN; UP TO 220 CFM
CD-3	CEILING DIFFUSER LOUVER FACE ADJUSTABLE	TITUS TDCA	22x22 FACE 24x24 FRAME	10"	STEEL, WHITE	LAY-IN; UP TO 400 CFM ADJUST TO FULL VERTICAL THROW.
RCD-1	CEILING DIFFUSER SQ CONE ROUND	TITUS TMR-AA	11 FACE	6"	ALUM, WHITE	DUCT MOUNTED UP TO 100 CFM
WL-1	LOUVER WEATHER PROOF 4" FIXED BLADE DRAINABLE	RUSKIN ELF375DX	12x12 FACE 14x14 FRAME		ALUMINUM, COORD. W/ ARCH	SIDEWALL MOUNTED WITH INTEGRAL FRAME AND INSECT SCREEN UP TO 200 CFM
RG-1	RETURN GRILLE EGG CRATE	TITUS 50F	22x22 FACE 24x24 FRAME	22x22	ALUMINUM, WHITE	LAY-IN; UP TO 1600 CFM

* RUNOUT DUCT SHALL BE THE SAME SIZE AS THE DIFFUSER NECK SIZE.
 COORDINATE AIR DEVICE DEFLECTION ADJUSTMENTS WITH MECHANICAL ENGINEER DURING AIR BALANCE.

MECHANICAL INSULATION SCHEDULE

SERVICE	INSULATION TYPE	THICKNESS
RESTROOM EXHAUST DUCTS, 1ST 10' FROM EXHAUST GRILLE	ACOUSTIC LINER	1"
SINGLE WALL ROUND OR OVAL SUPPLY AIR DUCTS - LOW AND MEDIUM PRESSURE	DUCT WRAP	2"
COPPER COOLING CONDENSATE DRAIN	ELASTOMERIC	3/8"
RECTANGULAR SUPPLY AIR DUCTS	ACOUSTIC LINER	1"
RECTANGULAR RETURN AIR DUCTS	ACOUSTIC LINER	1"
ALL OUTSIDE AIR DUCTS WITHIN BUILDING	DUCT WRAP	2"
COMBUSTION SUPPLY AIR DUCTS ABOVE CEILING	DUCT WRAP	2"
GREASE DUCT	THERMAL CERAMICS FIREMASTER DUCT FIRE PROTECTION SYSTEM. UL CLASSIFIED FOR 0" CLEARANCE FROM COMBUSTIBLES.	3"
CONDENSER WATER PIPE, BELOW GRADE	NO INSULATION	N/A
CONDENSER WATER PIPE, ABOVE GRADE	ELASTOMERIC	1/2"
ALL SUPPLY CEILING DIFFUSERS AND GRILLES	DUCT WRAP	2"

VENTILATION SCHEDULE

UNIT NO.	SUPPLY CFM	O.A. CFM	OA DUCT SIZE
FU-1	1200	120	6
FU-2	1200	120	6
FU-3	1600	160	8
FU-4	2000	200	8

MINI SPLIT HEAT PUMP UNITS

MARK	DESCRIPTION	MFR., MODEL	CFM/SEER	COOL CAP.	HEAT CAP.	VOLTS PHASE	FLA MCA MOCVP	COMMENTS
MAC-1	MINIATURE SPLIT SYSTEM AIR CONDITIONERS, INDOOR UNIT WALL MOUNTED	MISTSUBISHI FKA A18HA4	425 15.3	18 MBH	19 MBH	120 1	20A	MAC & MCU COMPRISE A SINGLE AIR CONDITIONING SPLIT SYSTEM AND INCLUDE MICROPROCESSOR CONTROLS, PROVIDE WALL MOUNT MHK1 WIRELESS REMOTE, ON/OFF 24-HOUR TIMER, AND WASHABLE AIR FILTER
MCU-1	MINIATURE SPLIT SYSTEM AIR CONDITIONERS, OUTDOOR HP UNIT	MISTSUBISHI PUZ A18NH44				208 1	12.4 13 20	FULL COOLING CAP TO 0 DEG WITH WIND BAFFLE

CONDENSING UNIT SCHEDULE

MARK	DESCRIPTION	MFR., MODEL	AREA SERVED	NOM. TONS	SEER	VOLTS/PHASE	FLA	MCA	MOCVP	WT. LBS	ACCESSORIES	REMARKS
CU-1,2	CONDENSING UNIT	DAIKIN DX14SA	SEE PLANS	3	14	208/1	15	18.6	30	162	COIL GUARD, TXV, CRANKCASE HEATER ANTI RECYCLE TIMER, LOW AMBIENT CONTROL	
CU-3	CONDENSING UNIT	DAIKIN DX14SA	SEE PLANS	4	14	208/1	19.9	26.4	45	201	COIL GUARD, TXV, CRANKCASE HEATER ANTI RECYCLE TIMER, LOW AMBIENT CONTROL	
CU-4	CONDENSING UNIT	DAIKIN DX14SA	SEE PLANS	5	14	208/1	26.3	32.6	50	260	COIL GUARD, TXV, CRANKCASE HEATER ANTI RECYCLE TIMER, LOW AMBIENT CONTROL	

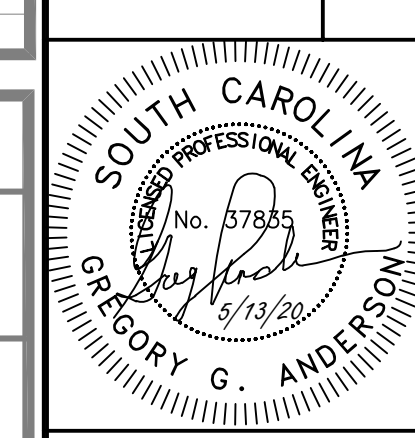
GAS-FIRED FURNACE UNIT SCHEDULE

MARK	DESCRIPTION	MFR., MODEL	DEPENDENT UNIT	AREA SERVED	NOM. TONS	DESIGN COOLING CFM	HEAT CFM	O/A CFM	E.S.P (IN.)	T.S.P (IN.)	COOL EAT/LAT	HEAT EAT/LAT	HEAT MBH IN	HEAT MBH OUT	VOLTS/PHASE	FAN HP	WT. LBS	CONTROL TYPE	ACCESSORIES	REMARKS
FU-1,2	FURNACE PROPANE-FIRED HORIZONTAL	DAIKIN DM92SS	CU-1	SEE PLANS	3	1200	1200	120	.5	-	80/55	70/95	60	55.3	120/1	1/3	140	T-STAT	CONCENTRIC VENT KIT	PROVIDE LABOR SAVER FILTER HOUSING. HORIZ CASED COIL
FU-3	FURNACE PROPANE-FIRED HORIZONTAL	DAIKIN DM92SS	CU-1	SEE PLANS	4	1600	1600	160	.5	-	80/55	70/95	80	73.7	115/1	1/2	140	T-STAT	CONCENTRIC VENT KIT	PROVIDE LABOR SAVER FILTER HOUSING. PROVIDE VERTICAL CASED COIL.
FU-4	FURNACE PROPANE-FIRED HORIZONTAL	DAIKIN DM92SS	CU-1	SEE PLANS	5	2000	2000	200	.5	-	80/55	70/95	100	92.1	120/1	3/4	140	T-STAT	CONCENTRIC VENT KIT	PROVIDE LABOR SAVER FILTER HOUSING. HORIZ CASED COIL

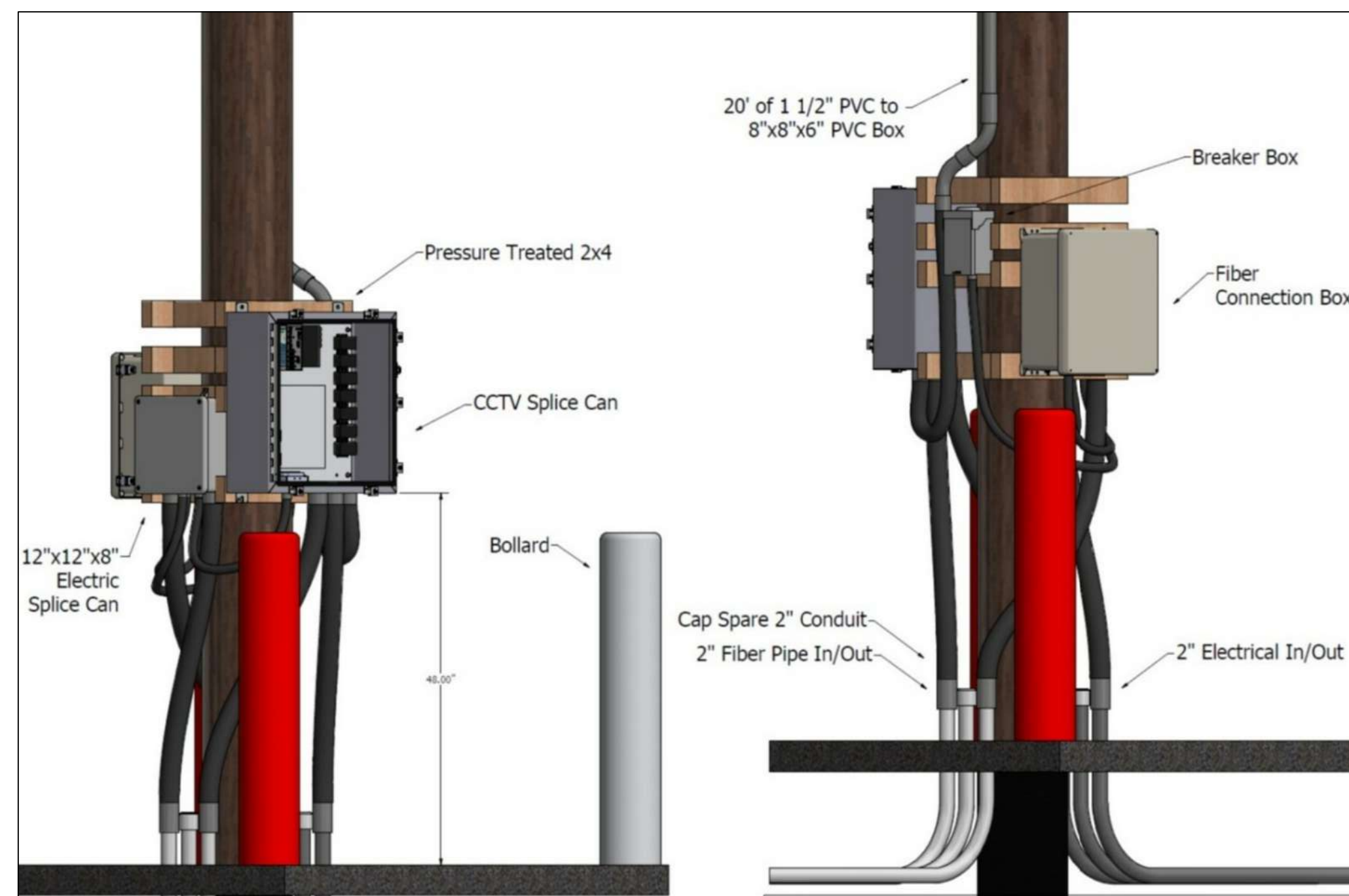
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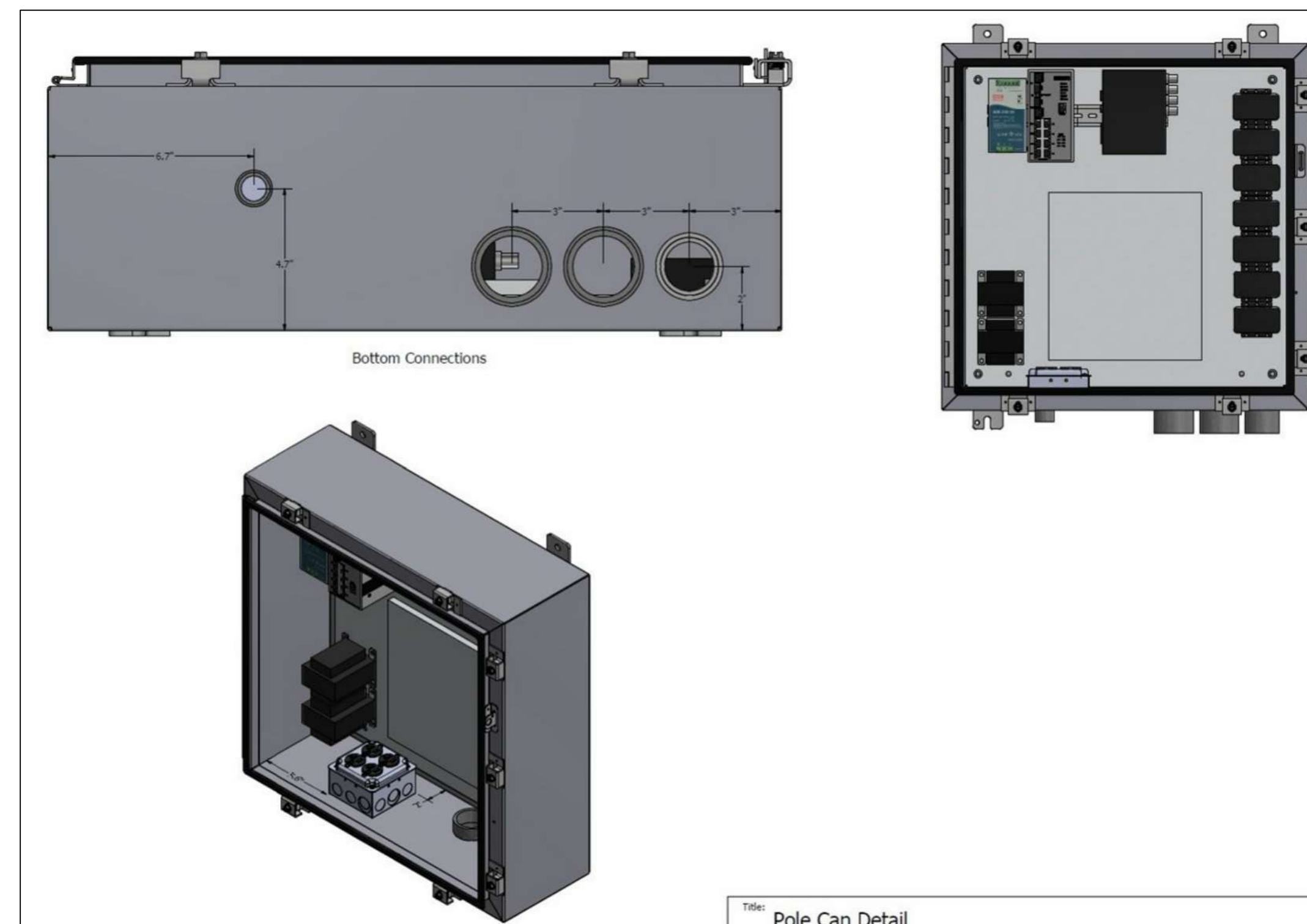
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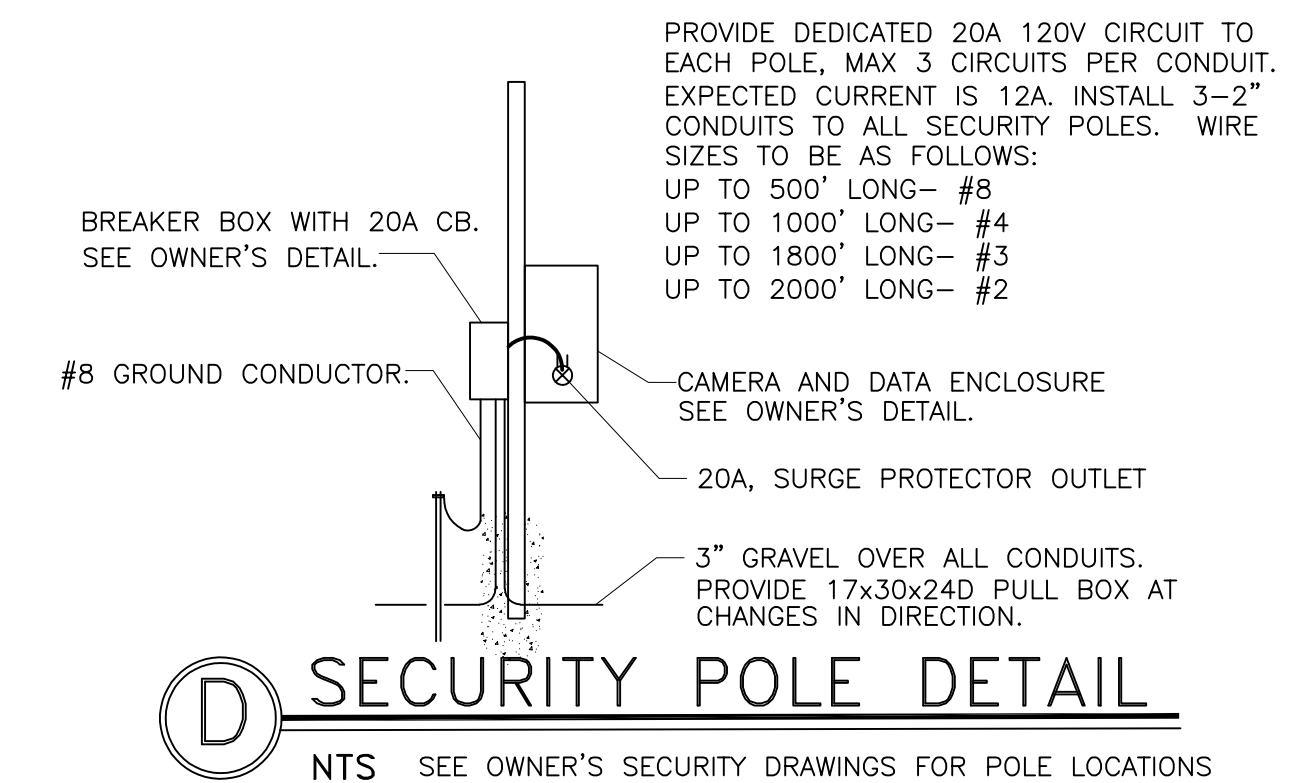
MECHANICAL SCHEDULES
 DATE: 05/13/20 JOB NO. 2020-09
 SHEET:



B CAMERA POLE DETAIL
NTS



C CCTV CAN DETAIL
NTS



D SECURITY POLE DETAIL
NTS SEE OWNER'S SECURITY DRAWINGS FOR POLE LOCATIONS



A ELECTRICAL SITE PLAN
Scale: 1/128" = 1'-0"

KEYED NOTES

- ① PROVIDE 120V 20 AMP CIRCUIT TO EACH POLE. EACH CIRCUIT SHALL SERVE 1 POLE. MAX 3 CIRCUITS PER CONDUIT. ADD MORE CONDUITS AS REQUIRED. WIRE SIZE SHALL BE AS SHOWN ON THE SCHEDULE ON THIS SHEET. CONFIRM VOLTAGE DROP AND ADJUST WIRE SIZE AS REQUIRED. LOAD IS 7 AMPS AT 120V PER CAMERA. PROVIDE 3 SEPARATE 3" CONDUITS FOR POWER, FIBER, AND SPARE TO EACH POLE. BURY CONDUITS 3" AND BACKFILL. PROVIDE 17x30x24 PULL BOXES AT ALL CHANGE OF DIRECTION OF CONDUIT ON SITE. ROUTE ALL CONDUITS TO IT ROOM IN BUYERS OFFICE BUILDING. FEED POWER CIRCUITS FROM PANEL S.
- ② CAMERA POLES SHALL BE 30' CLASS 4 UTILITY POLE SUNK 6' INTO THE GROUND. ON EACH POLE PROVIDE BREAKER BOX. POWER SHALL BE PROVIDED TO CAMERA EQUIPMENT AT 90-120V. PROVIDE 12x12 SPLICE BOX, 24x24 NEMA 4 CCTV BOX WITH BACK BOARD AND QUAD RECEPTACLE IN BOX. PROVIDE PVC PIPE FROM CCTV BOX UP TO CANTEX BOX AT THE TOP OF EACH POLE. PROVIDE WATER PROOF FLEX CONNECTION FROM CONDUIT TO NEMA BOX. PROVIDE ALL ITEMS AS SHOWN IN THE DETAILS AT EACH POLE. BOLLARDS TO BE PROVIDE BY GENERAL CONTRACTOR.
- ③ GAS PIPE EASEMENT SHOULD ONLY BE CROSSED WHERE APPROVED. SEE CIVIL PLANS.

② ADDED ENTIRE SHEET

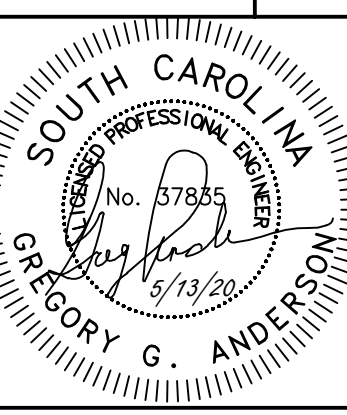


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#	DATE	COMMENTS
1	08/11/20	CIVIL AND PLAN MODIFICATIONS
2	09/02/20	ADD SECURITY CAMERAS ON SITE

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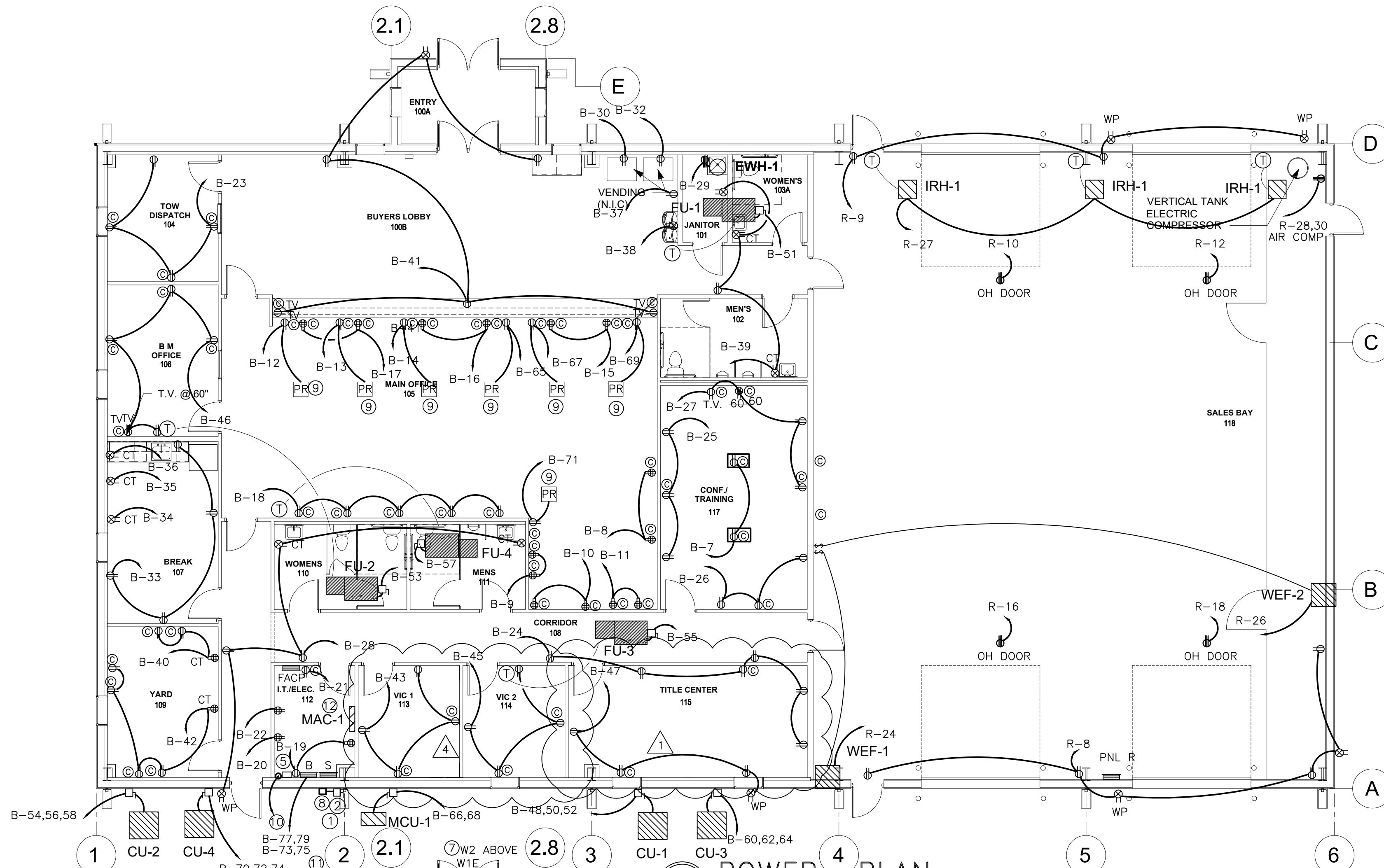
ELECTRICAL SITE PLAN
 DATE: 05/13/20
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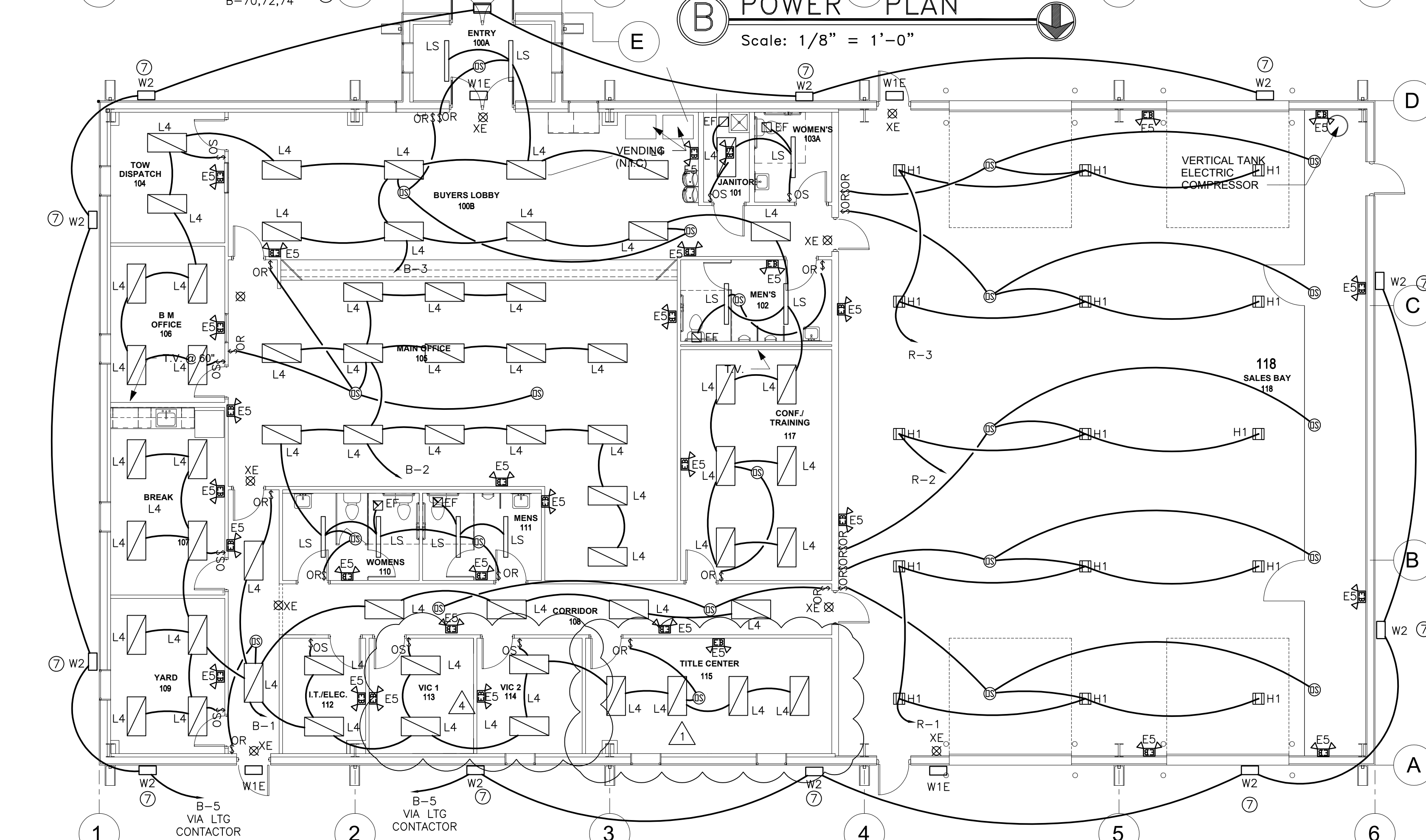


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B POWER PLAN
 Scale: 1/8" = 1'-0"



A LIGHTING PLAN
 Scale: 1/8" = 1'-0"

GENERAL POWER PLAN NOTES

- OUTLET ROUGH-IN COORDINATION:** COORDINATE EXACT LOCATIONS OF ALL OUTLETS IN AREAS WITH MILLWORK WITH ARCHITECTS MILLWORK ELEVATIONS PRIOR TO ROUGH-IN.
- TELEPHONE/ COMMUNICATIONS OUTLETS:** PROVIDE 3/4" CONDUIT, 2x4" JUNCTION BOX WITH DOUBLE GANG DEVICE RING FOR ALL TELEPHONE AND COMMUNICATIONS OUTLETS INDICATED ON THE ELECTRICAL DRAWINGS. ROUTE CONDUIT FROM BOX UP WALL AND TURN OUT TO ACCESSIBLE CEILING CAVITY. PROVIDE PLASTIC BUSHINGS ON CONDUIT ENDS. PROVIDE PULL STRING IN ALL EMPTY CONDUIT SYSTEMS. PROVIDE 1" CONDUIT WHERE REQUIRED BY COM CONTRACTOR.
- ELECTRIC WATER HEATERS:** MAKE CONNECTIONS AS REQUIRED. VERIFY REQUIREMENTS AND LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION. PROVIDE CORD AND PLUG AS REQUIRED.
- CONDUIT SIZING:** ALL CONDUITS FOR BRANCH CIRCUITING CONTAINING UP TO 10 #12 CONDUCTORS TO BE 3/4 INCH UNLESS LABELED OTHERWISE OR OTHERWISE REQUIRED BY NEC.
- EXISTING EQUIPMENT:** FIELD VERIFY LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, INCLUDING POWER POLES, TELEPHONE PEDESTALS, OVERHEAD AND UNDERGROUND FEEDERS, METERS, PANELS, DEVICES, ETC. PROVIDE FOR COORDINATION WITH EXISTING EQUIPMENT.
- THERMOSTAT CONDUITS:** PROVIDE 3/4" CONDUIT, AND 2x4" BOX WITH SINGLE GANG DEVICE RING FOR ALL THERMOSTAT LOCATIONS INDICATED ON THE MECHANICAL DRAWINGS. ROUTE CONDUIT FROM BOX TO ACCESSIBLE CEILING CAVITY. PROVIDE PLASTIC BUSHINGS ON EXPOSED CONDUIT ENDS. PROVIDE PULL STRING IN ALL EMPTY CONDUIT SYSTEMS. COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- MECHANICAL EQUIPMENT CONNECTIONS:** COORDINATE MECHANICAL EQUIPMENT CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. LOCATE FEEDERS, DISCONNECTS AND MAINTENANCE RECEPTACLES SO THAT THEY WILL NOT INTERFERE WITH OPERATION OR MAINTENANCE OF MECHANICAL EQUIPMENT.

KEYED NOTES

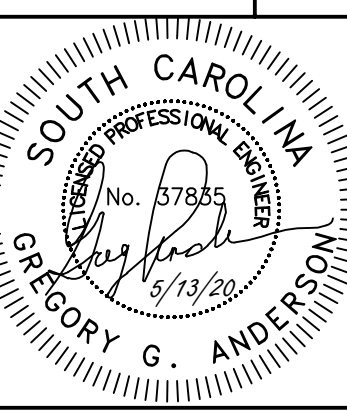
- COORDINATE ELECTRIC METER LOCATION AND SIZE WITH POWER COMPANY.
- EXTERIOR POWER SERVICE DISCONNECT
- 3/4" PLYWOOD PHONE BOARD WITH GROUND BAR. PROVIDE 2-2" CONDUITS TO LOCATIONS SPECIFIED BY IT COORDINATOR.
- POWER AND DATA OUTLETS MOUNTED IN MILLWORK. COORDINATE WITH ARCHITECT AND G.C.
- EXTERIOR LIGHTING CONTROL CONTACTORS.
- NOT USED.
- MOUNT WALL PACKS WITH BOTTOM AT 14' AFF.
- PROVIDE CONNECTION FOR PORTABLE GENERATOR. COORDINATE WITH OWNER.
- COORDINATE PRINTER LOCATION AND POWER REQUIREMENTS WITH OWNER.
- PROVIDE CONDUIT TO 14 POLE MTD SECURITY CAMERAS AT PARKING LOTS. COORDINATE REQUIREMENTS WITH OWNER.
- PROVIDE SEPARATE 208V/1PH CIRCUIT TO EACH OF 2 GUARD SHACKS. SEE SITE PLAN. COORDINATE REQUIREMENTS WITH OWNER.
- PROVIDE ISOLATED GROUND AT ALL OUTLETS IN THE IT ROOM.

GENERAL LIGHTING PLAN NOTES

- EXIT LIGHTS:** CONNECT EXIT LIGHTS TO UNSWITCHED PORTION OF ADJACENT LIGHTING CIRCUIT. DO NOT SWITCH.
- INDOOR FIXTURE LOCATIONS ARE SCHEMATIC IN NATURE;** LOCATION ADJUSTMENTS PRIOR TO INSTALLATION SHALL BE MADE AT NO COST TO OWNER. COORDINATE EXACT LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLAN. VERIFY IN FIELD.
- EMERGENCY LIGHTS:** EMERGENCY LIGHTS ARE SHOWN ON THE PLAN. PROVIDE EMERGENCY BALLAST. PROVIDE "HOT" WIRE TO EMERGENCY LIGHT FROM NEARBY LIGHTING CIRCUIT. DO NOT SWITCH EMERGENCY LIGHT FIXTURE.
- NOT USED**
- CEILING COORDINATION:** COORDINATE ALL CEILING MOUNTED ELECTRICAL ITEMS WITH OTHER DISCIPLINES AND WITH CEILING GRID & BAR JOIST. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.
- FIRE RATED CEILING:** WHERE RECESSED LIGHTING FIXTURES ARE INDICATED IN A FIRE RATED CEILING, PROVIDE A ONE HOUR RATED "TENT" AS DETAILED ON ARCHITECTURAL DRAWINGS.

#	DATE	COMMENTS
1	08/11/20	CIVIL AND PLAN MODIFICATIONS
2	09/02/20	ADD SECURITY CAMERAS ON SITE
3	11/04/20	PLUMBING COORDINATION
4	02/05/21	PLAN MODIFICATIONS

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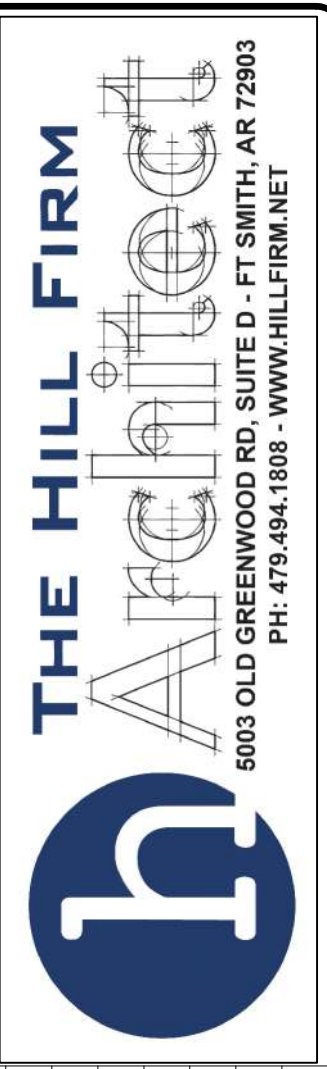


ELECTRICAL PLANS
 DATE: 05/13/20
 JOB NO: 2020-09

SHEET:
E1.0



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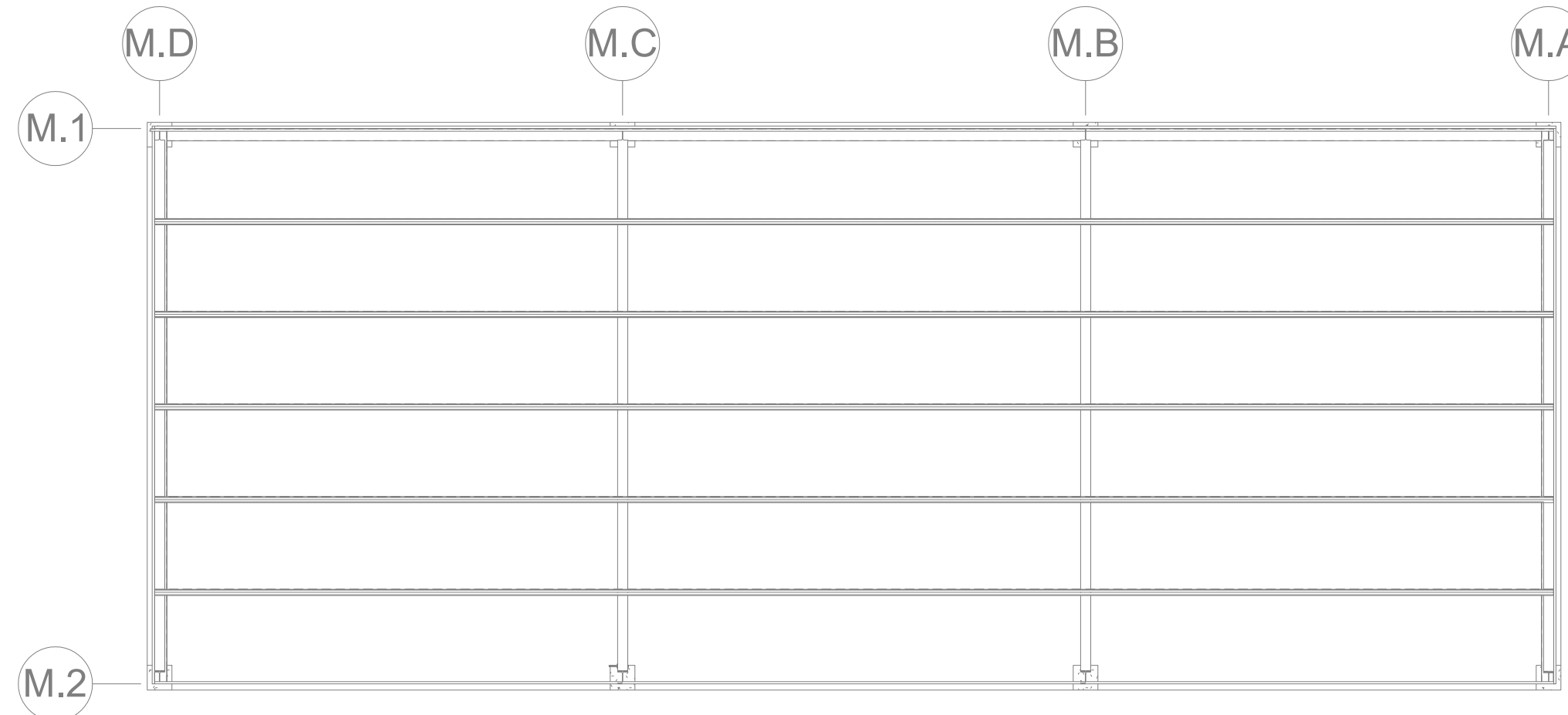
5003 OLD GREENWOOD RD. SUITE D - FT SMITH, AR 72903
 PH: 479.484.1808 - WWW.HILLFIRM.NET

LIGHTING FIXTURE SCHEDULE														
MARK	DESCRIPTION	MFGR.	MODEL	FINISH	LAMPS					FIXTURE				REMARKS
					DESCRIPTION	COLOR	TEMP, K	LUMENS	WATTS	QTY	BALLAST	LUMENS	WATTS	
LS	LED STRIP 4 FT LENSED WRAP AROUND	WILLIAMS	39-L30/835	WHITE	LED	3500	3000	25	1	LED	3000	25	120	SURFACE MTD

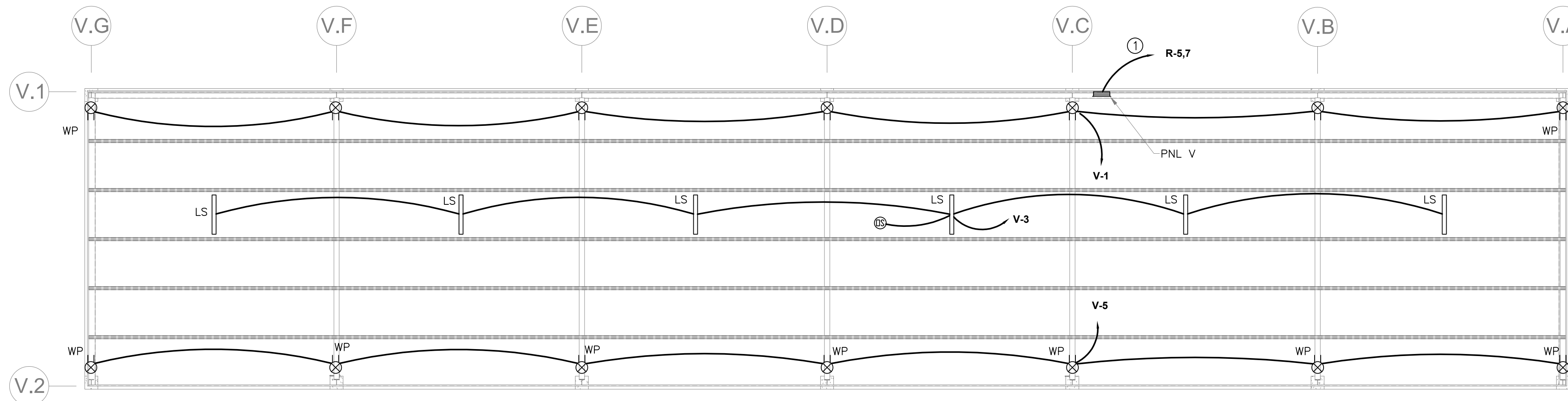
SWITCH SCHEDULE							
SYMBOL	DESCRIPTION	MFGR.	MODEL	VOLTAGE RATING	AMPS	MOUNTING HEIGHT AFF	REMARKS
Ⓢ	OCCUPANCY SENSOR	WATT STOPPER	DT-355	120V	20	RECESSED IN CEILING	DUAL TECHNOLOGY INFRA RED AND ULTRASONIC MOTION SENSOR, LINE VOLTAGE

RECEPTACLE SCHEDULE						
SYMBOL	DESCRIPTION	MFGR.	MODEL	NEMA	MOUNTING HEIGHT AFF	REMARKS
Ⓢ	DUPLEX GFCI W/ BACK & SIDE WIRE, TEST & RESET BUTTON	HUBBELL	GFRST20	5-20R	1'-6" TO TOP	SET TRIP POINT AT 5 MA FAULT CURRENT.

PANELBOARD SCHEDULE													
PANEL: V-VIC AND MC SHEDS				VOLTS: 120/208				AIC RATING: 22000					
MAIN: 100A MCB				PHASE: 3				MOUNTING: RECESSED					
FEED: MDP				WIRE: 4				LOCATION: VIC BACK WALL					
SQUARE D TYPE:													
LOAD DESCRIPTION	WIRE AWG.	BRKR	CCT. NO.	KVA			CCT. NO.	WIRE AWG.	LOAD DESCRIPTION				
LTS REC	OTHER			A	B	C			OTHER	REC	LTS		
7	REC VIC R	12	20/1	1	1.3	0.5		2	20/1	12			SPARE
6	LTS VIC	12	20/1	3				4	20/1	12			SPARE
7	REC VIC F	12	20/1	5				6	20/1	12			SPARE
	SPARE	12	20/1	7	0.5	0.5		8	20/1	12			SPARE
	SPARE	12	20/1	9				10	20/1	12			SPARE
TOTALS													
				1.8	1.0	0.7	1.0	1.3	0.5				
				2.8	1.7		1.8						
				TOTAL CONNECTED KVA		6.2							
				MAX CONNECTED AMPS		23.0							
				NEC DEMAND AMPS		17.2							



B MOTORCYCLE ELECTRICAL PLAN
 Scale: 1/8" = 1'-0"



A V.I.C. ELECTRICAL PLAN
 Scale: 1/8" = 1'-0"

GENERAL ELECTRICAL NOTES

- 1 PROVIDE A COMPLETE AND OPERATING ELECTRICAL SYSTEM INCLUDING ALL INCIDENTAL ITEMS AND CONNECTIONS NECESSARY FOR PROPER OPERATION.
- 2 FINAL LAYOUT SHALL BE GOVERNED BY ACTUAL FIELD CONDITIONS WITH ALL MEASUREMENTS VERIFIED AT THE SITE AND COORDINATED WITH OTHER TRADES.
- 3 PROVIDE CIRCUITS AND MAKE FINAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT, APPLIANCES, AND OTHER DEVICES REQUIRING ELECTRICAL POWER THAT ARE INDICATED ON ANY OF THE DRAWINGS OR SPECIFICATIONS CONTAINED HEREIN.
- 4 ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC) CURRENT EDITION AND ALL PRODUCTS SHALL BE NEW AND LISTED AND LABELED BY UNDERWRITERS LABORATORIES (UL). COMPLY WITH ALL APPLICABLE REGULATIONS AND LAWS.
- 5 WIRING AND CABLES SHALL BE SINGLE CONDUCTOR COPPER WITH 600 VOLT CODE TYPE THW OR THHN INSULATION. MINIMUM WIRE SIZE IS #12 AWG. INSTALL ALL POWER WIRING IN CONDUIT.
- 6 UNDERGROUND OR OUTSIDE CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT AND FITTINGS.
- 7 ABOVE GROUND CONDUIT INSIDE BUILDING SHALL BE EMT WITH SET SCREW OR COMPRESSION FITTINGS.
- 8 JUNCTION AND OUTLET BOXES SHALL BE OF CODE GAUGE GALVANIZED STEEL.
- 9 RIGIDLY SUPPORT CONDUIT AND BOXES FROM THE BUILDING STRUCTURE PER THE NEC PRIOR TO PULLING IN THE CONDUCTORS.
- 10 LEAVE PULL WIRE IN EMPTY CONDUIT WITH IDENTIFYING LABELS FOR FUTURE WIRE INSTALLATION.
- 11 IDENTIFY ELECTRICAL EQUIPMENT, SUCH AS PANELS, STARTERS, AND SPECIAL SWITCHES WITH PLASTIC NAMEPLATES. FILL OUT CIRCUIT DIRECTORIES COMPLETELY IN EACH PANEL.

GENERAL POWER PLAN NOTES

- 1.) OUTLET ROUGH-IN COORDINATION: COORDINATE EXACT LOCATIONS OF ALL OUTLETS WITH ARCHITECTS ELEVATIONS PRIOR TO ROUGH-IN.

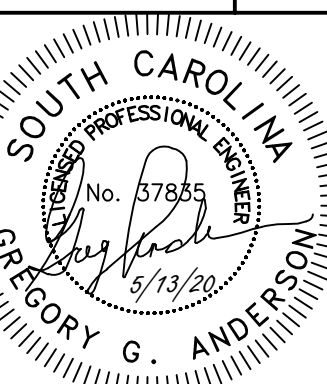
KEYED NOTES

- ① PROVIDE 100A/10 CCT/ 1PH PANEL FED FROM PANEL R IN RUN AND DRIVE BUILDING.

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V.I.C. & M/C ELECTRICAL PLANS

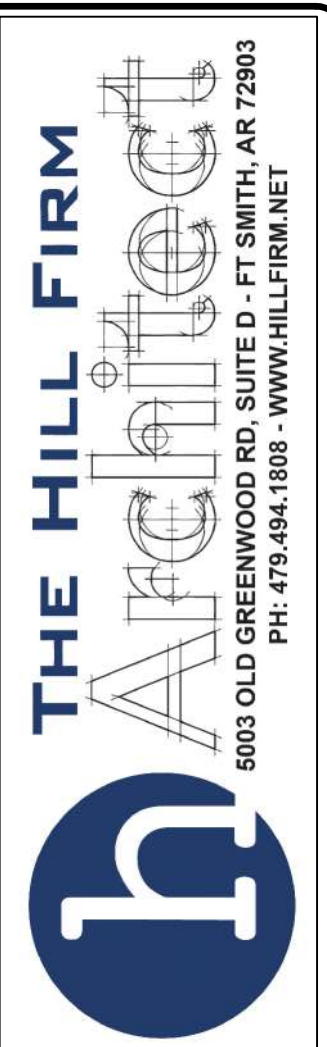
DATE: 05/13/20 JOB NO. 2020-09

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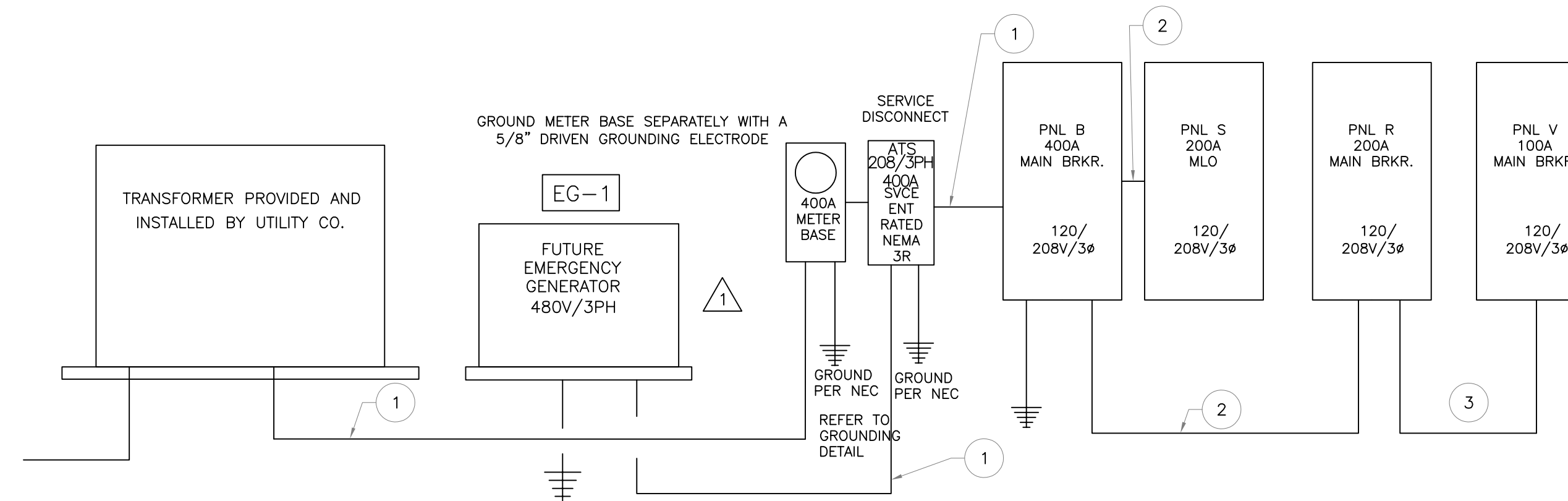
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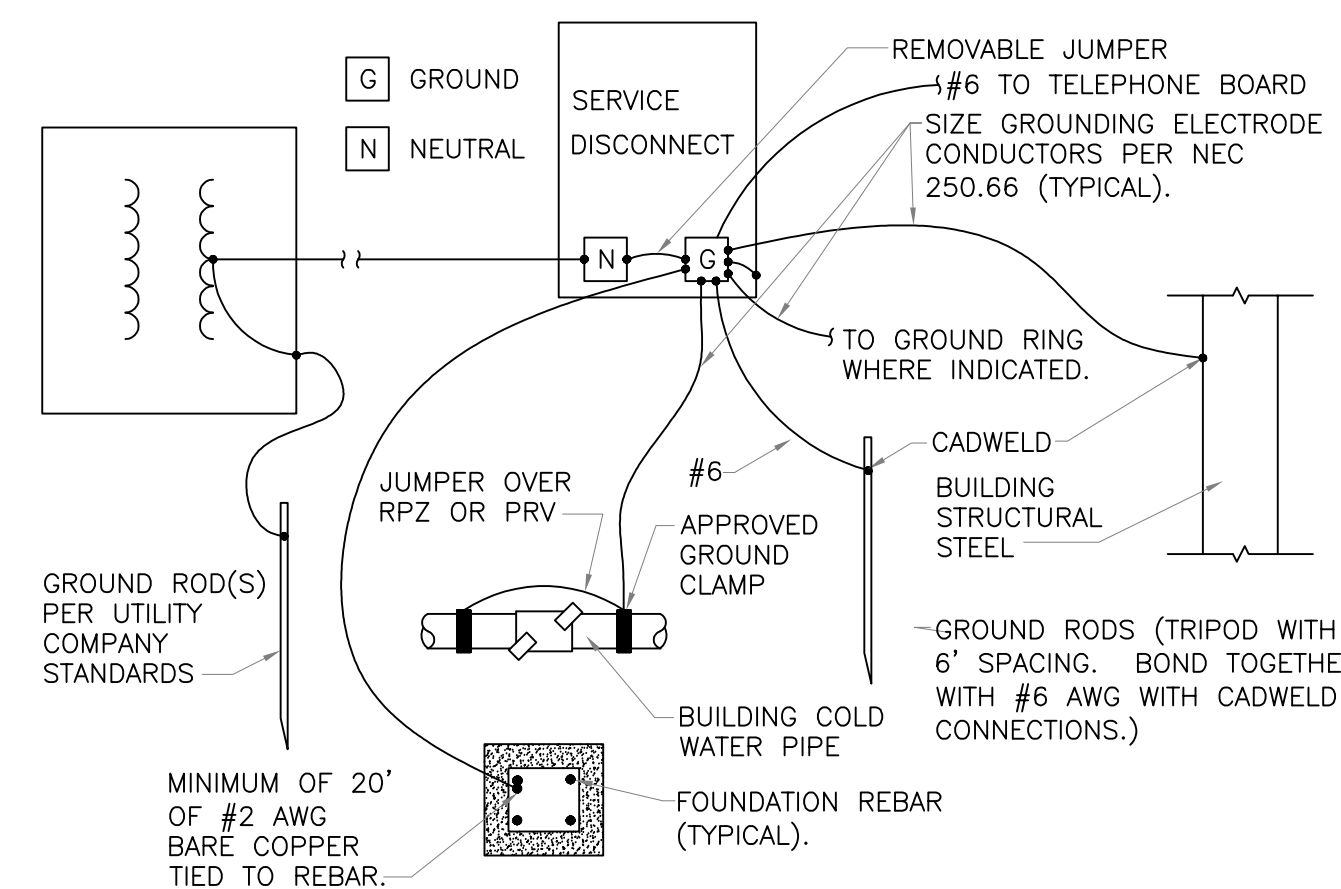
RECEPTACLE SCHEDULE						
SYMBOL	DESCRIPTION	MFR.	MODEL	NEMA	MOUNTING HEIGHT AFF	REMARKS
	DUPLEX W/ BACK & SIDE WIRE	COOPER	TR270	5-15R	1'-6" TO BOTTOM	-
	DUPLEX GFCI W/ BACK & SIDE WIRE, TEST & RESET BUTTON	COOPER	?	5-15R	1'-6" TO BOTTOM	SET TRIP POINT AT 5 MA FAULT CURRENT.
	ABOVE COUNTER GFCI DUPLEX W/ BACK & SIDE WIRE, TEST & RESET BUTTON	COOPER	?	5-15R	8" ABOVE COUNTERTOP.	SET TRIP POINT AT 5 MA FAULT CURRENT.
	SPECIAL	COOPER	SPECIFICATION GRADE OR BETTER	REF. DRAWING	8" ABOVE COUNTERTOP.	PROVIDE NEMA TYPE COMPATIBLE W/ PLUG CONFIGURATION OF APPLIANCE OR EQUIPMENT.
NOTE: 1. PROVIDE COVER PLATE AND ANY ACCESSORIES NEEDED FOR COMPLETE INSTALLATION OF RECEPTACLE. 2. COORDINATE COLOR OF ALL DEVICE AND COVER PLATES WITH ARCHITECT. 3. COORDINATE ALL MOUNTING HEIGHTS WITH ARCHITECT						

DISCONNECT SWITCH SCHEDULE						
MARK/ SYMBOLS	LOAD SERVED	VOLTS, POLE, WIRES	SWITCH AMPS	FUSES	NEMA ENCLOSURE	NOTES
S1 	EWH	120/208V 1P 3W	30A	NF	3R	NOTE a.
S2 	MCU	208V 3P 4W	30A	NF	3R	NOTE a.
S3 	AC UNITS	208V 3P 4W	60A	NF	3R	NOTE a.
SAFETY SWITCH SCHEDULE NOTES: a. HEAVY DUTY TYPE. b. SWITCH SHALL BE "SERVICE ENTRANCE" LABELED AND LISTED. c. PROVIDE AUXILIARY CONTACTS IN DISC SWITCH FOR ELEVATOR AUTOMATIC LOWERING CUTOFF d. VERIFY FUSE SIZE WITH EQUIPMENT MANUFACTURER'S NAMEPLATE DATA.						



B ELECTRICAL RISER DIAGRAM
 N.T.S.

FEEDER SCHEDULE			
MARK	AMPCACITY/ PHASE/ WIRES	LOAD SERVED	CONDUIT AND WIRE (COPPER)
1	400A 3PH 4W	PANEL B	3.5" C. 4-#500 1-#3_GND
2	200A 3PH 4W	PNL R	2" C. 4-#3/0 1-#6_GND
3	100A 3PH 4W	VIC PANEL V	1-1 1/4" C. 4-#2, 1#8_GND



A GROUNDING DETAIL
 N.T.S.

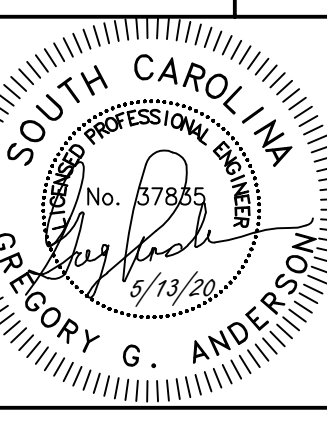
GENERAL ELECTRICAL NOTES

- PROVIDE A COMPLETE AND OPERATING ELECTRICAL SYSTEM INCLUDING ALL INCIDENTAL ITEMS AND CONNECTIONS NECESSARY FOR PROPER OPERATION.
- FINAL LAYOUT SHALL BE GOVERNED BY ACTUAL FIELD CONDITIONS WITH ALL MEASUREMENTS VERIFIED AT THE SITE AND COORDINATED WITH OTHER TRADES.
- PROVIDE CIRCUITS AND MAKE FINAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT, APPLIANCES, AND OTHER DEVICES REQUIRING ELECTRICAL POWER THAT ARE INDICATED ON ANY OF THE DRAWINGS OR SPECIFICATIONS CONTAINED HEREIN.
- ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC) CURRENT EDITION AND ALL PRODUCTS SHALL BE NEW AND LISTED AND LABELED BY UNDERWRITERS LABORATORIES (UL). COMPLY WITH ALL APPLICABLE REGULATIONS AND LAWS.
- WIRING AND CABLES SHALL BE SINGLE CONDUCTOR COPPER WITH 600 VOLT CODE TYPE THW OR THHN INSULATION. MINIMUM WIRE SIZE IS #12 AWG. INSTALL ALL POWER WIRING IN CONDUIT.
- UNDERGROUND OR OUTSIDE CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT AND FITTINGS.
- ABOVE GROUND CONDUIT INSIDE BUILDING SHALL BE EMT WITH SET SCREW OR COMPRESSION FITTINGS.
- MAKE FINAL CONNECTIONS TO MOTORS, PUMPS, OR OTHER VIBRATING EQUIPMENT WITH "SEALTIGHT" FLEXIBLE CONDUIT.
- JUNCTION AND OUTLET BOXES SHALL BE OF CODE GAUGE GALVANIZED STEEL.
- RIGIDLY SUPPORT CONDUIT AND BOXES FROM THE BUILDING STRUCTURE PER THE NEC PRIOR TO PULLING IN THE CONDUCTORS.
- SAFETY DISCONNECT SWITCHES SHALL BE HEAVY DUTY "HD" TYPE IN NEMA 1 ENCLOSURE OF RATINGS AS SHOWN ON THE DRAWINGS OR REQUIRED BY EQUIPMENT SERVED. FUSED DISCONNECT SWITCHES SHALL BE COMPLETE WITH CURRENT LIMITING FUSES.
- LEAVE PULL WIRE IN EMPTY CONDUIT WITH IDENTIFYING LABELS FOR FUTURE WIRE INSTALLATION.
- IDENTIFY ELECTRICAL EQUIPMENT, SUCH AS PANELS, STARTERS, AND SPECIAL SWITCHES WITH PLASTIC NAMEPLATES. FILL OUT CIRCUIT DIRECTORIES COMPLETELY IN EACH PANEL.
- PAY ALL PERMITS AND INSPECTION FEES REQUIRED.
- PROVIDE CONTROL WIRING, AS WELL AS POWER WIRING FOR HVAC EQUIPMENT.

ELECTRICAL LEGEND			
DIMENSIONS SHOWN BELOW ARE STANDARD MOUNTING HEIGHTS TO CENTER LINE OF DEVICE UNLESS OTHERWISE SPECIFIED.			
HOME RUN PANEL AND CIRCUIT NOTED		CIRCUIT CONDUCTORS; INSULATED GROUND, NEUTRAL AND HOT, RESPECTIVELY	x
DUPLEX RECEPTACLE (1'6" AFF)		TV DUPLEX RECEPTACLE (7'6" AFF)	TV
GFCI DUPLEX RECEPTACLE (1'6" AFF)		CT INDICATES COUNTER TOP HEIGHT DEVICE. COORDINATE ELEVATION WITH COUNTER HEIGHT AND BACKSPASH. LOCATE WHERE SHOWN ON ARCH ELEVATIONS.	CT
QUADRUPLX RECEPTACLE (1'6" AFF)			
SIMPLEX RECEPTACLE (1'6" AFF)		RECESSED FLOOR BOX WITH DEVICES AS INDICATED	
SPECIAL RECEPTACLE (1'6" AFF)			
LOWER CASE LETTERS INDICATE SWITCHING CONFIGURATION. TWO LETTERS ON SAME FIXTURE INDICATES INBOARD - OUTBOARD SWITCHING.	a, b, c	SINGLE POLE SWITCH 20A, 120/277V (4'0" AFF TO TOP)	\$
		THREE WAY SWITCH 20A, 120/277V (4'0" AFF TO TOP)	\$3
		DIMMER SWITCH (4'0" AFF TO TOP)	\$D
EXIT LIGHT: PROVIDE DIRECTIONAL INDICATION AS REQUIRED PER CODE. DO NOT SWITCH.		EMERGENCY LIGHT WITH BATTERY BACKUP, LETTER INDICATES TYPE.	
NON-FUSED DISCONNECT SWITCH (4'0" AFF TO TOP)		EMERGENCY LIGHT	
TV CABLE OUTLET (7'6" AFF)		MOTOR	
DUCT MOUNTED SMOKE DETECTOR		JUNCTION BOX	
EMERGENCY	(E)	DIRECT CONNECTION TO EQUIPMENT	
WEATHER PROOF	WP	COMMUNICATIONS OUTLET (1'6" AFF)	
GROUND FAULT CIRCUIT INTERRUPTER	GFCI	EXISTING TO REMAIN	ETR
ISOLATED GROUND	IG	ELECTRICAL CONTRACTOR	EC
ABOVE FINISHED FLOOR	AFF	UNDER GROUND	U/G

COMMENTS	
#	DATE
1	DATE

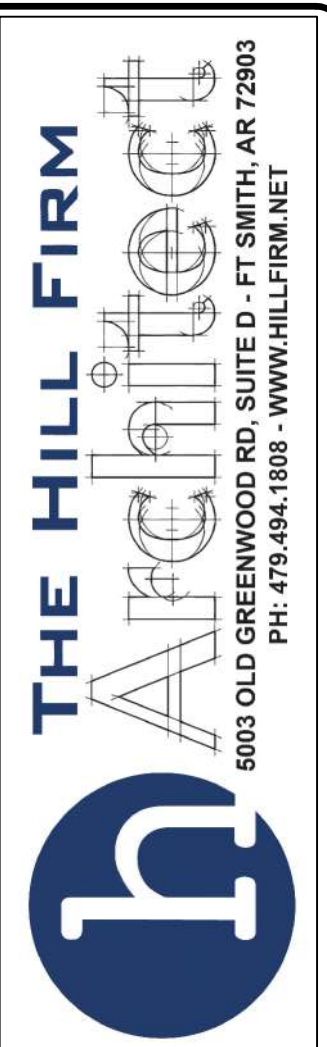
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ELECTRICAL SCHEDULES AND NOTES	
DATE:	JOB NO.
05/13/20	2020-09
SHEET:	
E2.1	



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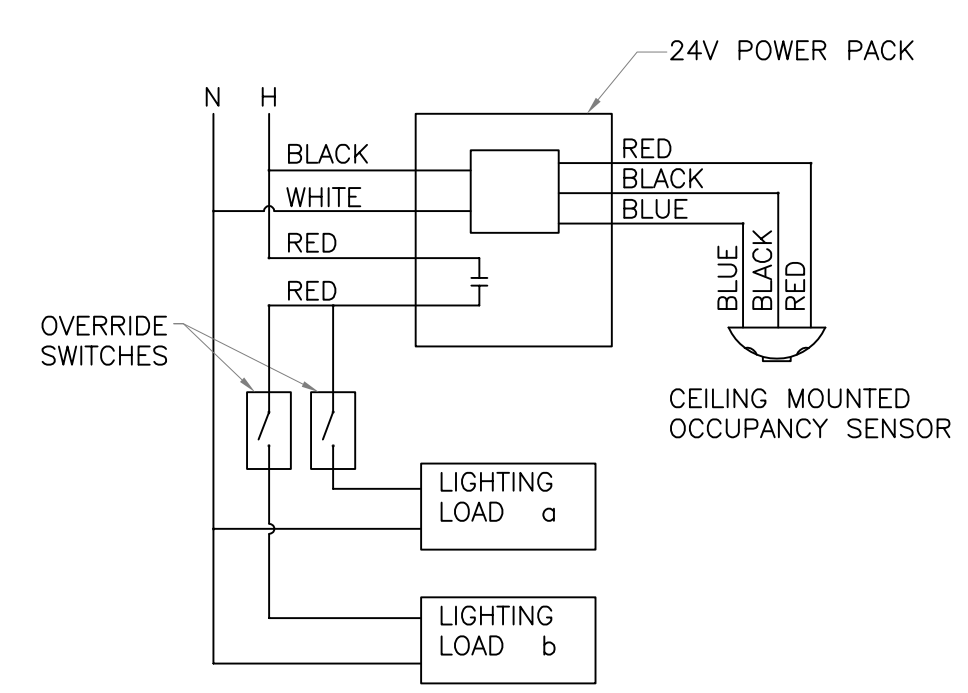


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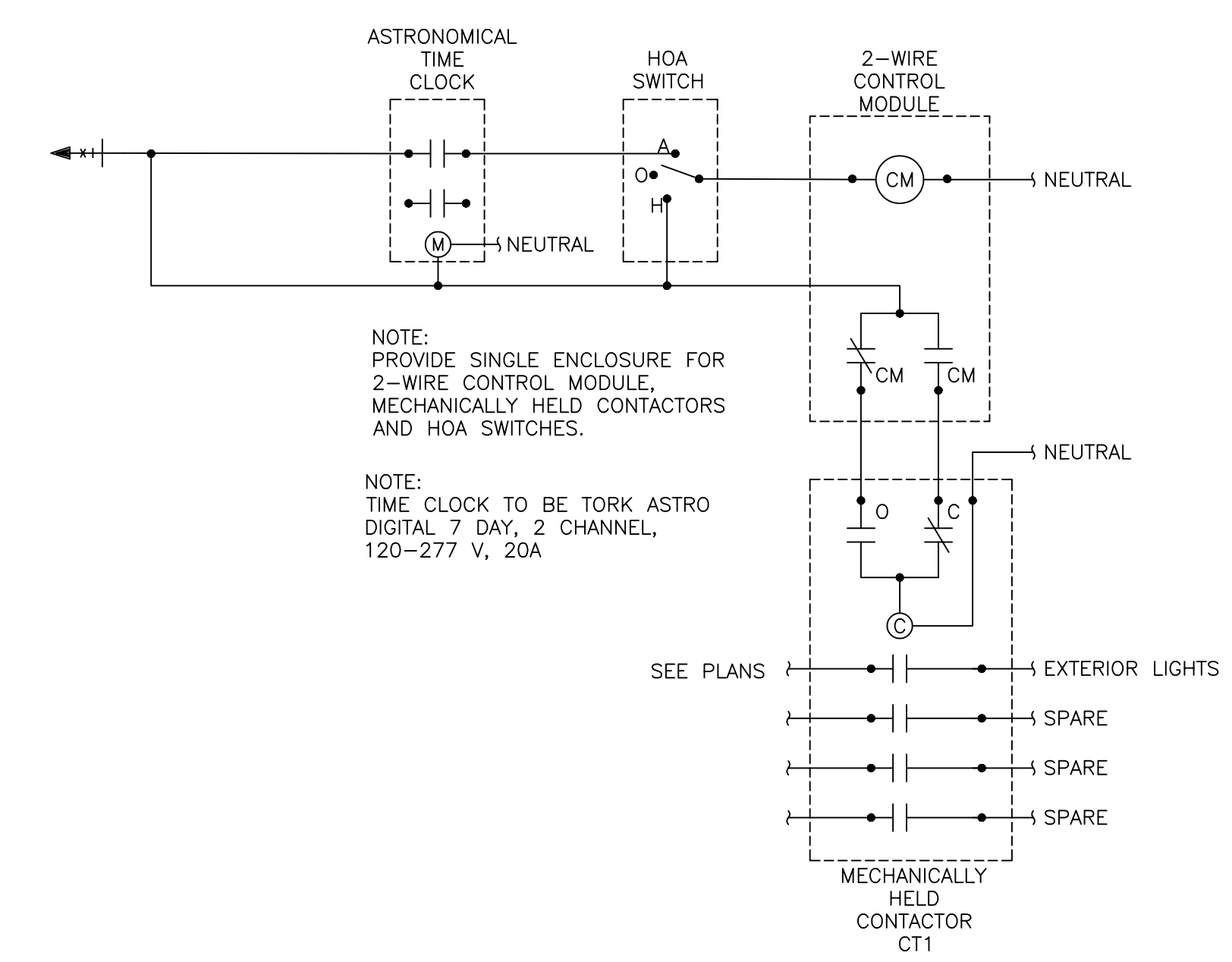
LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	MFG.	MODEL	FINISH	LAMPS				FIXTURE				REMARKS	
					DESCRIPTION	COLOR TEMP, K	LUMENS	WATTS	QTY	BALLAST	LUMENS	WATTS		VOLTS
C1	6" DISK LIGHT SURFACE MTD WHITE TRIM LED	C&F LIGHTING	LED022WH	WHITE	LED	3000K	1000	15	1	LED	1000	15	120	DIMMABLE MOUNT ON FIRE RATED JBOX WHERE REQUIRED WET LOCATION
E5	EMERGENCY LIGHT ULTRA COMPACT LED	BARRON EXITRONIX	LED 52 WH G2	WHITE	LED	6000	-	2	2	2	250	5	120	90 MINUTE EM BATTERY 1FC @ 30' OC
H1	HIGH BAY SUSPENDED LED CLEAR ACRYLIC REFLECTOR. MILKY LENS	GE ALBEO	ABV2-1-1-E-48 D-V-23-A-B-W	WHITE	LED DIMMABLE	4000K	18,200	122	1	LED	18,200	122	120	3/4" PIPE PENDANT MOUNT.
L4	2x4 LAY IN PANEL LED CCT SELECT DIMMABLE	VENTURE	DLC-P124-48 ANR-C	WHITE	LED	3500K 4000K 5000K	4660 4740 5030	44	1	LED	4660 4740 5030	44	120	80+ CRI DAMP LOC IC RATED
LS	LED STRIP 4 FT LENSED WRAP AROUND	WILLIAMS	39-L30/835	WHITE	LED	3500	3000	25	1	LED	3000	25	120	SURFACE MTD
W1E	WALL MTD COMPACT EGRESS LIGHT, LED TEARDROP	BARRON EXITRONIX	TRL ACEM	BZ AL WH	LED	5000	1080	11	-	LED	1080	11	120	90 MINUTE EM BATTERY 1FC @ 30' OC WET LOCATION
W2	WALL PACK LOW PROFILE CAST ALUM LED	WILLIAMS	VWPH-L60/740 T4-DBZ-120V	BRONZE	LED	4000	6000	70	-	LED	6000	70	120	-
W2 ALTERNATE	SECURITY WALL PACK CAST ALUM LED	CREE SECURITY EDGE	SEC-EDG 4M WM 12 E UL BZ 40K	BRONZE	LED	4000	13000	130	-	LED	13000	130	120	-
XE	EXIT AND LED BAR EMERGENCY LIGHT	BARRON LED	CLED-U-WH	WHITE	LED	-	-	4.5	1	LED	-	4.5	120	90 MINUTE EM BATTERY 1FC @ 12'x6'

NOTES:
 - ALL FIXTURES SHALL BE PROVIDED WITH ALL ACCESSORIES FOR A COMPLETE INSTALLATION, INCLUDING MOUNTING HARDWARE.
 - CONTRACTOR SHALL VERIFY FIXTURE MOUNTING TYPE IS COMPATIBLE WITH CEILING TYPE AND STRUCTURAL CONDITIONS.
 - FINISHES SHALL BE COORDINATED WITH ARCHITECT OR OWNER BEFORE ORDERING.
 - PROVIDE BALLAST EQUAL TO BODINE B50, BATTERIES AND CHARGER AT EMERGENCY FIXTURES.
 - PROVIDE 0 DEGREES F RATED BALLAST AT OUTDOOR INSTALLATIONS OF FIXTURES.
 - PROVIDE SAFETY CABLES AND WIRE GUARDS WHERE REQUIRED.



C OCCUPANCY SENSOR WIRING DIAGRAM
 N.T.S.



B LIGHTING CONTROL WIRING DIAGRAM EXTERIOR LIGHTS - LTC1
 N.T.S.

SWITCH SCHEDULE

SYMBOL	DESCRIPTION	MFG.	MODEL	VOLTAGE RATING	AMPS	MOUNTING HEIGHT AFF	REMARKS
\$	SINGLE POLE	HUBBELL	HBL122	120-277V	20	4'-0" TO TOP AFF	PROVIDE HIGH CAPACITY SILVER ALLOY SWITCH CONTACTS
\$ ₃	THREE-WAY	HUBBELL		120-277V	20	4'-0" TO TOP AFF	PROVIDE HIGH CAPACITY SILVER ALLOY SWITCH CONTACTS
\$ _{os}	OCCUPANCY SENSOR WALL SWITCH	LEVITON	OSSMT	120-277V	20	4'-0" TO TOP AFF	PROVIDE HIGH CAPACITY SILVER ALLOY SWITCH CONTACTS
\$ _{os}	OCCUPANCY SENSOR WALL SWITCH WITH DIMMER	LUTRON MAESTRO	MS-Z101-XX	120-277V	20	4'-0" TO TOP AFF	PROVIDE HIGH CAPACITY SILVER ALLOY SWITCH CONTACTS, 0-10V DIMMING FOR LED LIGHT FIXTURES.
Ⓢ	OCCUPANCY SENSOR	WATT STOPPER	DT-355	120V	20	RECESSED IN CEILING	DUAL TECHNOLOGY INFRA RED AND ULTRASONIC MOTION SENSOR, LINE VOLTAGE

NOTE: 1. PROVIDE COVER PLATE AND ANY ACCESSORIES NEED FOR COMPLETE INSTALLATION OF SWITCHING DEVICE.
 2. COORDINATE COLOR OF DEVICE AND COVER PLATES WITH ARCHITECT.
 3. PROVIDE OCCUPANCY SENSORS WITH POWER PACKS AS REQUIRED IN RESTROOMS, CORRIDORS & CLASSROOMS. POWER PACKS SHALL BE RATED FOR 120 VOLT SWITCHING. SET DELAY TO 15 MINUTES. PROVIDE POWER TO POWER PACKS FROM NEAREST 277V EMERGENCY CIRCUIT.

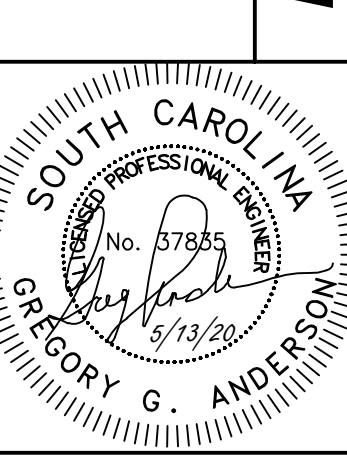
LIGHTING CONTACTOR SCHEDULE

MARK	LOAD SERVED	MANUF., MODEL NO.	NUMBER OF POLES	COIL VOLTAGE CONTACTING RATING	NEMA ENCLOSURE	NOTES
LTC1	EXTERIOR LIGHTS	SQUARE D #LX	4	120V 20A	1	NORMALLY OPEN NOTE a.

LIGHTING CONTRACTOR SCHEDULE NOTES:
 a. PROVIDE HAND/OFF/AUTO SWITCH PER SPECIFICATIONS.
 b. PROVIDE TWO-WIRE CONTROL RELAY FOR COIL CLEARING.

#	DATE	COMMENTS
	DATE	
1		

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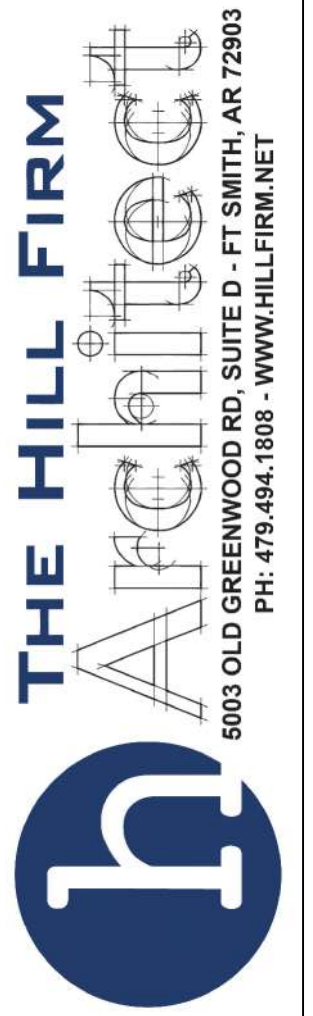


ELECTRICAL LIGHTING SCHEDULES AND DETAILS
 DATE: 05/13/20
 JOB NO. 2020-09

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5803 OLD GREENWOOD RD, SUITE D - FT SMITH, AR 72303
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PANELBOARD SCHEDULE

PANEL: S-SECURITY
 MAIN: 200 A MLO
 FEED: PANEL B

VOLTS: 120/208
 PHASE: 3
 WIRE: 4

AIC RATING: 22000
 MOUNTING: SURFACE
 LOCATION: WALL

SQUARE D TYPE: NQO

LTS REC	LOAD DESCRIPTION	OTHER	WIRE AWG.	BRKR	CCT. NO.	KVA			CCT. NO.	BRKR	WIRE AWG.	LOAD DESCRIPTION	OTHER	REC	LTS
						A	B	C							
	CAMERA POLE 1		12	20/1	1	0.8	0.8		2	20/1	12	CAMERA POLE 2			
	CAMERA POLE 3		12	20/1	3		0.8	0.8	4	20/1	12	CAMERA POLE 4			
	CAMERA POLE 5		12	20/1	5			0.8	6	20/1	12	CAMERA POLE 6			
	CAMERA POLE 7		12	20/1	7	0.8	0.8		8	20/1	12	CAMERA POLE 8			
	CAMERA POLE 9		12	20/1	9		0.8	0.8	10	20/1	12	CAMERA POLE 10			
	CAMERA MC		12	20/1	11			0.8	12	20/1	12	CAMERA VIC			
	SPARE		12	20/1	13	0.5	0.5		14	20/1	12	SPARE			
	SPARE		12	20/1	15		0.5	0.5	16	20/1	12	SPARE			
	SPARE		12	20/1	17			0.5	18	20/1	12	SPARE			
	SPARE		12	20/1	19	0.5	0.5		20	20/1	12	SPARE			
	SPARE		12	20/1	21		0.5	0.5	22	20/1	12	SPARE			
	SPACE				23			0.5	24			SPACE			
	SPACE				25	0.0	0.0		26			SPACE			
	SPACE				27		0.0	0.0	28			SPACE			
	SPACE				29			0.0	30			SPACE			
	SPACE				31	0.0	0.0		32			SPACE			
	SPACE				33		0.0	0.0	34			SPACE			
	SPACE				35			0.0	36			SPACE			
	SPD				100/3	37	0.0	0.0	38			SPACE			
						39		0.0	40			SPACE			
						41		0.0	42			SPACE			
TOTALS															
						2.7	2.7	2.7	2.7	2.7	2.2				
						5.4					4.9				

TOTAL CONNECTED KVA: 15.6
 MAX CONNECTED AMPS: 44.7
 NEC DEMAND AMPS: 50.2

PANELBOARD SCHEDULE

PANEL: B-BUYERS OFFICE
 MAIN: 400 A MCB
 FEED: METER

VOLTS: 120/208
 PHASE: 3
 WIRE: 4

AIC RATING: 22000
 MOUNTING: SURFACE
 LOCATION: ELECT ROOM

SQUARE D TYPE: NQO

LTS REC	LOAD DESCRIPTION	OTHER	WIRE AWG.	BRKR	CCT. NO.	KVA			CCT. NO.	BRKR	WIRE AWG.	LOAD DESCRIPTION	OTHER	REC	LTS
						A	B	C							
42	LTS NORTH		12	20/1	1	1.3	1.2		2	20/1	12	LTS CENTER			30
24	LTS SOUTH		12	20/1	3		1.0	0.5	4	20/1	12	LTS SPARE			
14	LTS EXT		12	20/1	5			1.0	6	20/1	12	SPARE			
	SPARE		12	20/1	7	0.5	0.7		8	20/1	12	REC 105 E			4
4	REC 105 NE		12	20/1	9		0.7	0.7	10	20/1	12	REC 105 NE			4
4	REC 105 NE		12	20/1	11			0.7	12	20/1	12	REC 105 PRN 1			2
2	REC 105 PRN 2		12	20/1	13	0.4	0.4		14	20/1	12	REC 105 PRN 3			2
4	REC 105 SW		12	20/1	15		0.7	0.7	16	20/1	12	REC 105 WC			4
4	REC 105 NW		12	20/1	17			0.7	18	20/1	12	REC 105 E			5
2	REC IT/EXT		12	20/1	19	0.4	0.4		20	20/1	12	REC IT NW			2
1	REC FACP		12	20/1	21		0.2	0.4	22	20/1	12	REC IT SW			2
2	REC 104 TOW		12	20/1	23			0.4	24	20/1	12	REC 108 116			6
3	REC CONF W		12	20/1	25	0.5	0.5		26	20/1	12	REC CONF N			3
3	REC CONF SE		12	20/1	27		0.5	0.5	28	20/1	12	REC CORR 108 W			3
	REC EWH-1		10	30/1	29			1.7	30	20/1	12	VENDING			
4	REC 106 BM		12	20/1	31	0.7	0.5		32	20/1	12	VENDING			
4	REC BRK WALLS		12	20/1	33		0.7	0.2	34	20/1	12	REC BRK CTR N			1
1	REC BRK CTR S		12	20/1	35			0.2	36	20/1	12	REC FRIDGE			
1	REC 100 E		12	20/1	37	0.2	0.5		38	20/1	12	REC EWC			
3	REC RR S		12	20/1	39		0.5	0.7	40	20/1	12	REC YARD S			4
6	REC LOBBY		12	20/1	41			1.1	42	20/1	12	REC YARD N			6
4	REC VIC 1		12	20/1	43	0.7	0.5		44	20/1	12	SPARE			
4	REC VIC 2		12	20/1	45		0.7	0.5	46	20/1	12	SPARE			
4	REC VIC 3		12	20/1	47			0.7	48	30/3	10	CU-1			
4	REC		12	20/1	49	0.7	1.8		50		10				
	FU-1		12	20/1	51		1.5	1.8	52		10				
	FU-2		12	20/1	53		1.5	1.8	54	30/3	10	CU-2			
	FU-3		12	20/1	55	1.5	1.8		56		10				
	FU-4		12	20/1	57		1.5	1.8	58		10				
	PANEL R		3/0	200/3	59			8.7	60	45/3	8	CU-3			
			3/0		61	10.9	2.4		62		8				
			3/0		63		12.0	2.4	64		8				
2	REC 105 PRN 4		12	20/1	65			0.4	66	20/2	12	MCU-1			
2	REC 105 PRN 5		12	20/1	67	0.4	1.5		68		12				
2	REC 105 PRN 6		12	20/1	69		0.4	3.2	70	50/3	8	CU-4			
2	REC 105 PRN 7		12	20/1	71			0.4	72		8				
	PANEL S		3/0	200/3	73	5.4	3.2		74		8				
			3/0		75		5.4	0.0	76	100/3		SPD			
			3/0		77			4.9	78						
	GUARD SHACK		6	40/2	79	2.0	0.0		80						
			6		81		2.0	0.5	82	20/1	12	SPARE			
	SPARE		12	20/1	83			0.5	84	20/1	12	SPARE			
TOTALS															
						25.5	15.4		27.8	13.9	22.8	16.1			
						40.9			41.8		38.9				

TOTAL CONNECTED KVA: 121.6
 MAX CONNECTED AMPS: 348.0
 NEC DEMAND AMPS: 329.0

PANELBOARD SCHEDULE

PANEL: R-RUN AND DRIVE AREA
 MAIN: 200 A MCB
 FEED: METER

VOLTS: 120/208
 PHASE: 3
 WIRE: 4

AIC RATING: 22000
 MOUNTING: SURFACE
 LOCATION: WALL

SQUARE D TYPE: NQO

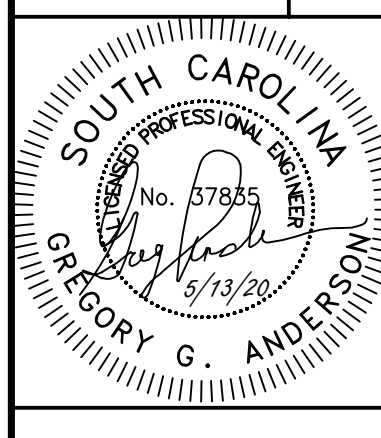
LTS REC	LOAD DESCRIPTION	OTHER	WIRE AWG.	BRKR	CCT. NO.	KVA			CCT. NO.	BRKR	WIRE AWG.	LOAD DESCRIPTION	OTHER	REC	LTS
						A	B	C							
10	LTS		12	20/1	1	1.0	0.5		2	20/1	12	LTS			5
10	LTS		12	20/1	3		1.0	0.3	4	20/1	12	LTS EXT			8
	PANEL V		3	100/2	5			2.8	6	20/1	12	SPARE			
			3		7	1.7	1.1		8	20/1	12	REC N			6
5	REC S		12	20/1	9		0.9	1.6	10	20/1	12	OH DOOR			
0	SPARE		12	20/1	11			0.5	12	20/1	12	OH DOOR			
0	SPARE		12	20/1	13	0.5	0.5		14	20/1	12	SPARE			
0	SPARE		12	20/1	15		0.5	1.6	16	20/1	12	OH DOOR			
0	SPARE		12	20/1	17			0.5	18	20/1	12	OH DOOR			
0	SPARE		12	20/1	19	0.5	0.5		20	20/1	12	SPARE			
0	SPARE		12	20/1	21		0.5	0.5	22	20/1	12	SPARE			
	SPARE		12	20/1	23			0.5	24	20/1	12	WEF-1			
	SPARE		12	20/1	25	0.5	0.5		26	20/1	12	WEF-2			
	IRH-1		12	20/1	27		1.0	1.5	28	30/2	10	AIR COMPRESSOR			
0	SPARE		12	20/1	29			0.5	30		10				
	SPD				100/3	31	0.0	0.5	32	20/2	12	SPARE			
						33		0.0	34		12	SPARE			
						35			36	20/1	12	SPARE			
	SPARE		12	20/1	37	0.5	0.5		38	20/1	12	SPARE			
	SPARE		12	20/1	39		0.5	0.5	40	20/1	12	SPARE			
	SPARE		12	20/1	41			0.5	42	20/1	12	SPARE			
TOTALS															
						4.7	4.1	4.4	6.5	5.3	6.7				
						8.7			10.9		12.0				

TOTAL CONNECTED KVA: 31.6
 MAX CONNECTED AMPS: 99.7
 NEC DEMAND AMPS: 89.7

#	DATE	COMMENTS
1	08/11/20	CIVIL AND PLAN MODIFICATIONS
2	09/02/20	ADD SECURITY CAMERAS ON SITE

Insurance Auto Auction, Inc.
 TBD
 Lexington, South Carolina 29073

PERMIT - CONSTRUCTION DOCUMENTS



ELECTRICAL PANEL SCHEDULES
 DATE: 05/13/20
 JOB NO: 2020-09

SHEET: **E2.3**

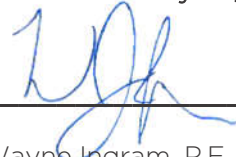
CIVIL ENGINEERING
ENVIRONMENTAL
SURVEYING
LANDSCAPE ARCHITECTURE
GEOTECHNICAL

ENVIRONMENTAL IMPACT STATEMENT

248 Stickles Pond Road
Block 151 Lot 21
Andover Township,
Sussex County,
New Jersey

Prepared For:
BHT Properties Group
5081 SW 48th Street, 1023
Davie, Florida 33314

December 12, 2019
Revised January 26, 2021



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New Jersey Professional Engineer
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- Appendix A: Preliminary & Final Site Plans (Attached Separately)
- Appendix B: Stormwater Management Report (Attached Separately)

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- Figure 1: USGS Map
- Figure 2: Zoning Map
- Figure 3: USDA Web Soil Survey Map
- Figure 4: NJDEP Wetlands Existing Conditions Plan



1. INTRODUCTION

Engineering & Land Planning Associates, Inc. has prepared this Environmental Impact Statement (EIS) on behalf of BHT Properties Group. This EIS has been prepared in accordance with the requirements of Section 131-13, the Environmental Impact Statement Ordinance. The EIS provides an inventory of existing natural resources, an assessment of the environmental impacts of the proposed project, environmental protective measures, and lists unavoidable adverse impacts should the project be implemented per the ordinance.

The proposed project consists of the construction of a construction office with construction equipment and material storage areas on the property located on 248 Stickles Pond Road, on Lot 151, Block 21 in Andover Township, Sussex County, New Jersey. The 100-acre subject property currently consists of a former airport. The proposed project consists of the demolition of hangars, paved drives, concrete pads, three dwellings, two garages, and three sheds. The existing 112,050 square foot asphalt runway is to remain. The proposed construction consists of a 12,860 square foot building, 2,883 square feet of concrete sidewalk and curbing, lighting and landscape improvements, 35,235 square feet to be paved with asphalt for parking and circulation and 1,822,812 square feet to be paved with asphalt millings and used as construction equipment and material storage area. The materials to be stored in site are stone, aggregate, precast concrete structures and other typical natural construction materials.

The significant findings of the EIS include the following:

1. The purpose of the project is to construct a construction office with construction equipment and material storage areas and parking spaces. This new facility is proposing an approved use of the Township Zoning Ordinance.
2. The potential for soil erosion during the construction process would be minimized through the implementation of a soil erosion and sediment control plan.
3. The proposed development includes a proposed stormwater management system that meets all of the quantity, quality, and recharge requirements outlined in Stormwater Management Rules of N.J.A.C. 7:8.
4. The increase in municipal services, including the anticipated water and wastewater demand will be accommodated by the installation of a well and septic system by the proposed building.

In summary, it is anticipated that the proposed site improvements can be implemented without creating any appreciable adverse environmental impacts. If environmental impacts are incurred, appropriate mitigation measures will be implemented.



2. EXISTING ENVIRONMENTAL CONDITIONS

2.1 Phase I Environmental Site Assessment

The Phase I Environmental Site Assessment has revealed no evidence of Controlled Recognized Environmental Conditions (CRECs). The site did identify Historic Underground Storage Tanks (USTs), which is a Historical Recognized Environmental Condition (HRECs). The area assessed identified three Recognized Environmental Condition (RECs), Those are historic agricultural use and an unidentified Underground Storage Tank. The third Recognized Environmental Condition included two older Aboveground Storage Tanks (ASTs) but no signs of holes or release were reported and the tanks were empty and no longer in use.

2.2 Topography

The topographic relief on the property ranges from 588 to 645 feet above MSL. The surface topography fluctuates from moderately flat land along Stickles Pond Road, the southern part of the property, to various steep sections scattered throughout the property.

2.3 Air Quality

There is no air quality monitoring station in Sussex County. A 2019 Air Quality Index Report from the Passaic County monitoring station shows the average Air Quality Index to be at 40, which is in the range of "Good" quality. The Good Level of Health Concern considers the air quality to be satisfactory, with air pollution posing little or no risk. During Phase I Environmental Investigation, no noxious odors were detected.

2.4 Noise Levels

The noise levels on the site are generally adequate to low due to the surrounding wooded areas and residential lots. The prior airport use would have generated higher noise levels from planes taking off and landing at the site.

2.5 Water Supply and Water Quality

The property is bisected by a sub-watershed, Pequest River (above Brighton). Pequest River tributaries are located near the northwest and northern edges of the property, at least 35 feet from the northwestern corner of the property. The Pequest River flows into Stickle Pond, which is located east adjacent to the property.

The water quality on the site is generally adequate and no known contamination exists on the property. There is a 3.81-acre groundwater contamination area (CEA) approximately 800 feet away from the southwestern edge of the property.



2.6 Drainage

Stormwater run-off follows the surface topography and flows across the site to either the Pequest River tributary or Stickle Pond, as well as draining into the wetlands on and off site. There are no existing stormwater conveyance on the site that collects the generated stormwater runoff.

2.7 Critical Impact Areas

The township identifies areas of significant concern as stream corridors, streams, wetlands, slopes greater than 15%, highly acidic or erodible soils, areas of high-water table, mature strands of native vegetation, aquifer recharge and discharge areas.

NJDEP GeoWeb indicates a Total Maximum Load (TDML) Streamshed for Phosphorous to Address Four Impaired Assessment Units in the Pequest River Watershed, dated 2010 at Pequest River (above Brighton).

Five separate wetlands appear to be completely within the property lines with two other wetlands partially on the site, as seen on Figure 4: NJDEP Wetlands Ex. Conditions Plan. NJDEP GeoWeb lists a 1.4-acre Deciduous Wooded Wetlands is located in the western region on-site and a 0.70-acre Deciduous Scrub/Shrub Wetlands is located on-site at the eastern corner of the property. The wetlands found partially within the property boundary are listed as 4.36-acre Deciduous Wooded Wetlands and 5.81-acre Deciduous Scrub/Shrub Wetlands.

This property is part of the State Planning Area for Limited Growth identified as a Rural Environmentally Sensitive Planning Area, meaning environmental constraints affect development. As part of the NJ Wildlife Action Plan, this site falls within the Skylands Landscape Region. The site is within a 1,336-acre Vernal Habitat Area with a Vernal Pool Location on site in the western region of the site, at the previously described Deciduous Wooded Wetlands.

Five separate groundwater recharge areas are found within the property boundaries. The Northwest Upper Delaware watershed recharge area found at the northern, eastern, and southwestern portions of the site has a "B" Groundwater Recharge Ranking. The Northwest Upper Delaware watershed recharge area found along the western and northeastern edges of the property has an "A" Groundwater Recharge Ranking. The Northwest Upper Delaware watershed found at the center of the site has a "D" Groundwater Recharge Ranking. The Northwest Upper Delaware watershed recharge areas found at the locations of the wetlands have a "W" Groundwater Recharge Ranking, which is identified as wetlands, open water- no recharge calculated and an "L" Groundwater Recharge Ranking, which is identified as hydric soil-no recharge calculated.

NJDEP GeoWeb lists three bedrock aquifers within the boundaries of the site, Jacksonburg Limestone, Kittatinny Supergroup, and Hardyston Quartzite.



2.8 Sewer Systems and Utilities

During Phase I Environmental Investigation, a septic system was identified on-site. According to documents provided by the Township of Andover, the sewage disposal system was installed in 2001, listed as a “Commercial/Institutional” Facility with waste types to be charged listed as “sanitary sewage”.

During Phase I Environmental Investigation, a historic pumphouse was identified behind the 214 Stickles Pond residence and a jet pump was observed in the basement of the 210 Stickles Pond Road structure, which appeared to service a hot water heater. Therefore, there are potable wells on-site.

2.9 Geology

The surficial geology beneath the site is Allentown Dolomite. The geology of the site consists of mainly sedimentary rock, specifically dolostone and shale. The dolomite is medium to very light gray color and fine to medium grained. The bedrock aquifers beneath the site are known as Jacksonburg Limestone, Kittatinny Supergroup, and Hardyston Quartzite, according to NJDEP GeoWeb.

2.10 Soils and Slope Stabilities

The *USDA Soil Survey of Sussex County, New Jersey* as published by the *NRCS Web Soil Survey (WSS 2009)* indicates that the site is comprised of the following major soil series/phases, as referred to on Figure 3:

- FaxC- Farmington-Rock Outcrop Complex (0 to 15 percent slopes);
- HdxpAb - Hazen-Paulins Kill Complex (0 to 3 percent slopes);
- USFARC - Urban Land-Farmington-Rock Outcrop Complex (0 to 15 percent slopes)

The USDA Soil Survey of Sussex County, New Jersey indicates that the site primarily contains Hazen-Paulins Kill Complex. The site also contains Farmington-Rock Outcrop Complex and Urban Land-Farmington-Rock Outcrop Complex.

Farmington-Rock Outcrop Complex is referred to as FaxC as indicated on Figure 3. The Farmington-Rock Series consists of well-drained, somewhat excessively drained, loamy till soil derived from limestone and dolomite. They are nearly level to very steep soils on glaciated uplands. This soil complex is classified as high runoff class and Hydrologic Soil Group D.

Hazen-Paulins Kill Complex is referred to as HdxpAb. as indicated on Figure 3. The Hazen-Paulins Kill Series consists of very deep, well-drained, soils made up of gravelly loam, formed in Wisconsin glaciofluvial deposits derived from sandstone and shale. They are nearly level to very steep soils on outwash deltas and valleys associated with proglacial lake basins. This soil complex is classified as Hydrological Soil Group B, having high saturated hydraulic conductivity with surface runoff ranging from low to high.

Urban Land-Farmington-Rock Outcrop Complex is referred to as USFARC as indicated on Figure 3. The parent materials include buildings, pavement, and



other impervious surfaces over loamy till derived from limestone and dolomite. This soil complex is classified as Hydrologic Soil Group D.

2.11 Vegetation

The property is a mixture of open grasslands and dense woods. Generally, the flatter areas are covered by the grasslands and the steeper areas to the west and north are wooded. The vegetated areas are identified as deciduous forest with greater than 50% Crown Closure and deciduous brush and shrubland with some of the clearing identified as cropland and pastureland for former agriculture use.

2.12 Land Use and Demography

The property is located in the C/I Zone of Andover Township and currently consists of a former airport. The property is surrounded by farmlands to the northwest, more dense undeveloped woods and a religious center to the north, and light residential development and few businesses in all other directions. The demographics of the property and the surrounding area is consistent with the demographics of the Township as a whole. The land use is consistent with the Commercial/Industrial zone

2.13 Aesthetics

The 100-acre property is mostly wooded but currently contains an unused 112,050 square foot runway from the former airport. At the eastern corner of the property are several unused buildings, including three unoccupied residences known as 210 Stickles Pond Road, 214 Stickles Pond Road, and 216 Stickles Pond Road. The other unnecessary structures remaining on the property consist of two garages and three sheds.

2.14 History

The property does not contain any historic buildings or resources.



3. PROBABLE IMPACTS & MITIGATION

3.1 Topography

The proposed development includes a proposed grading plan. The proposed topography will provide stable slopes and conveyances for surface water runoff. Natural drainage patterns will be maintained to the extent possible.

3.2 Air Quality

The proposed project will not substantially impact air quality on- or off-site. The sources for potential air pollutants are the construction materials to be stored, but it's not expected to cause a degradation of air quality.

3.3 Noise Levels

The proposed development will not result in any sources of noise or vibration levels in excess of State standards.

3.4 Water Supply and Freshwater Wetlands Protection

The well found during the Phase I Environmental Site Assessment will be removed and a new well is proposed near the proposed building at the south corner of the property, which will service the site.

For the seven areas of wetlands identified on the site, proposed disturbance is to maintain the buffer zones of 150' around the wetlands boundary. According to the proposed grading plan, grading will encroach on the buffer of the wetlands identified as Wetlands B and Wetlands E in Appendix A. The buffers of the wetlands identified as Wetlands A, B, D, E, and F have been previously disturbed for prior development on site.

3.5 Drainage and Flood Protection

The project includes a stormwater management design that has been designed in accordance with NJDEP standards for a Major Stormwater Development Project. The property is within the FEMA Zone X, area of minimal flood hazard.

There is no existing stormwater conveyance along Stickles Pond Road or on the site. The increase in impervious surfaces from the proposed development may result in a degradation of the quality of the stormwater runoff and increased flows across the site. This is mitigated through the use of six above-ground infiltration basins designed to capture, treat, and infiltrate the stormwater runoff. The proposed locations of the referenced systems along with the proposed inlet and conveyances are shown on the "Grading and Drainage Plan" of Appendix A. For the full analysis of existing and proposed drainage on-site, see the Stormwater Management Report (Appendix B).

3.6 Sewer Systems and Utilities

The proposed development will be serviced by the private proposed septic system and proposed well on-site at the southern edge of the property to the



east of the proposed building. The proposed septic system shall be constructed in compliance with the N.J.D.E.P. N.J.A.C. 7:9A, Standards for Individual Subsurface Sewage Disposal Systems and will consist of a septic tank, pump tank, and disposal field.

The project consists of a proposed electric service connection to the utility poles located along Stickles Pond Road, as shown in Appendix A. A will-serve letter from Jersey Central Power and Light is being sought.

3.7 Geology Stability

The proposed development will have minimal impact on site geology.

3.8 Soil Stability and Erosion Control

There is the potential for short term unavoidable impacts to soil erosion at the site during construction activities. The project will follow all procedures set to minimize soil erosion on and surrounding the site.

Cut and fill of soil on the site is to remain as balanced as possible. The proposed limit of disturbance for the construction of the facility and the proposed grading is 59.79 acres (2,604,395 square feet) and will be kept at a minimum. Locations of proposed silt fencing, a proposed temporary soil stockpile, and recommended soil compaction testing are shown on Erosion & Sediment Control Plan in Appendix A.

3.9 Vegetation

The property contains densely wooded areas that will be altered as part of the development. This tree removal and tree protection will be mitigated in accordance with the Township tree removal ordinance of on-site tree replacement.

3.10 Land Use and Demography

The proposed use of a construction office with construction equipment and material storage areas is an approved use of the commercial industrial zoning district. The property meets the Townships requirements for this zone: the facility will fall on a lot size greater than 3 acres and proposes less than 60% impervious surface coverage.

3.11 Aesthetics

The proposed development has been designed to be aesthetically pleasing with adequate lighting. The development will include a Lighting and Landscaping Plan, as seen in Appendix A.

3.12 History

No impacts are anticipated to any historic resources.



3.13 Displacement of People and Businesses

The proposed project will have no effect on the displacement of people and businesses.

3.14 Marketability of Proposed Use

The proposed project will result in an increase in employment since a business will be brought to an unused property. The implementation of the project will also create construction jobs.

3.15 Disruption of Desirable Community and Regional Growth

The replacement of the unused airport and unoccupied dwellings with the construction of a construction office with construction equipment and material storage areas will not affect community growth.

3.16 Spill Prevention Measures

The project will be constructed in conformance with all local, state and federal regulations. The proposed construction office with construction equipment and material storage areas do not involve the dismantling of the construction equipment. No parts are removed from the construction equipment and no maintenance is performed on site. No flammable or extra hazardous materials are to be stored on or included in the construction of the site.

In the unlikely event that spillage or leakage were to occur, trained operators have defined protocols to remediate the spillages, as stated in the Operational Manual included as Appendix C.

3.17 Police and Fire Protection and Emergency Health Services

The proposed project does not entail the need for the implementation of increased police protection, emergency health services, or fire protection of the property. Stickles Pond is a natural fire protection resource existing adjacent to the site that is able to provide water for extinguishing any potential fires to occur during construction.

3.18 Traffic

The traffic in the proposed area is expected to increase slightly.

3.19 Solid Waste Generation and Disposal

Any solid waste generation will be picked up from the trash enclosure proposed on-site near the proposed staging and loading area, as seen on in Appendix A.

3.20 Construction Impact

The construction impacts include an increase in noise levels associated with the heavy construction equipment required for site and grading improvements. Construction is to be performed during hours permitted by the



Township's ordinance. Appropriate measures will be taken in accordance to the approved Soil Erosion and Sediment Control to control potential erosion and dust generated during construction.

The construction activities and equipment are to be kept within the property boundaries so that impacts on the surrounding properties are avoided. The proposed grading for the development shall be completed in phases, so that the overall grading improvements within the proposed limits of disturbance are not taking place at once. The construction equipment will be relocated as necessary. Permanent covers will be installed to the areas disturbed before moving construction equipment onto the sequential phase of grading.

4. ALTERNATIVES ANALYSIS

4.1 No Build Option

A no build option was considered as part of this alternatives analysis. This would not allow the property owner to realize the economic potential of the property. There would be no new impacts as a result of this option because there would be no changes to the property.

4.2 Less Intensive Option

A less intensive development was considered for the property. This alternative includes less disturbance and less impervious cover. This alternative would result in a slightly reduced footprint of development. However, the property and its surroundings can support the larger development and the reduction in size impacts the economic viability of the project.

5. LICENSES, PERMITS & APPROVALS

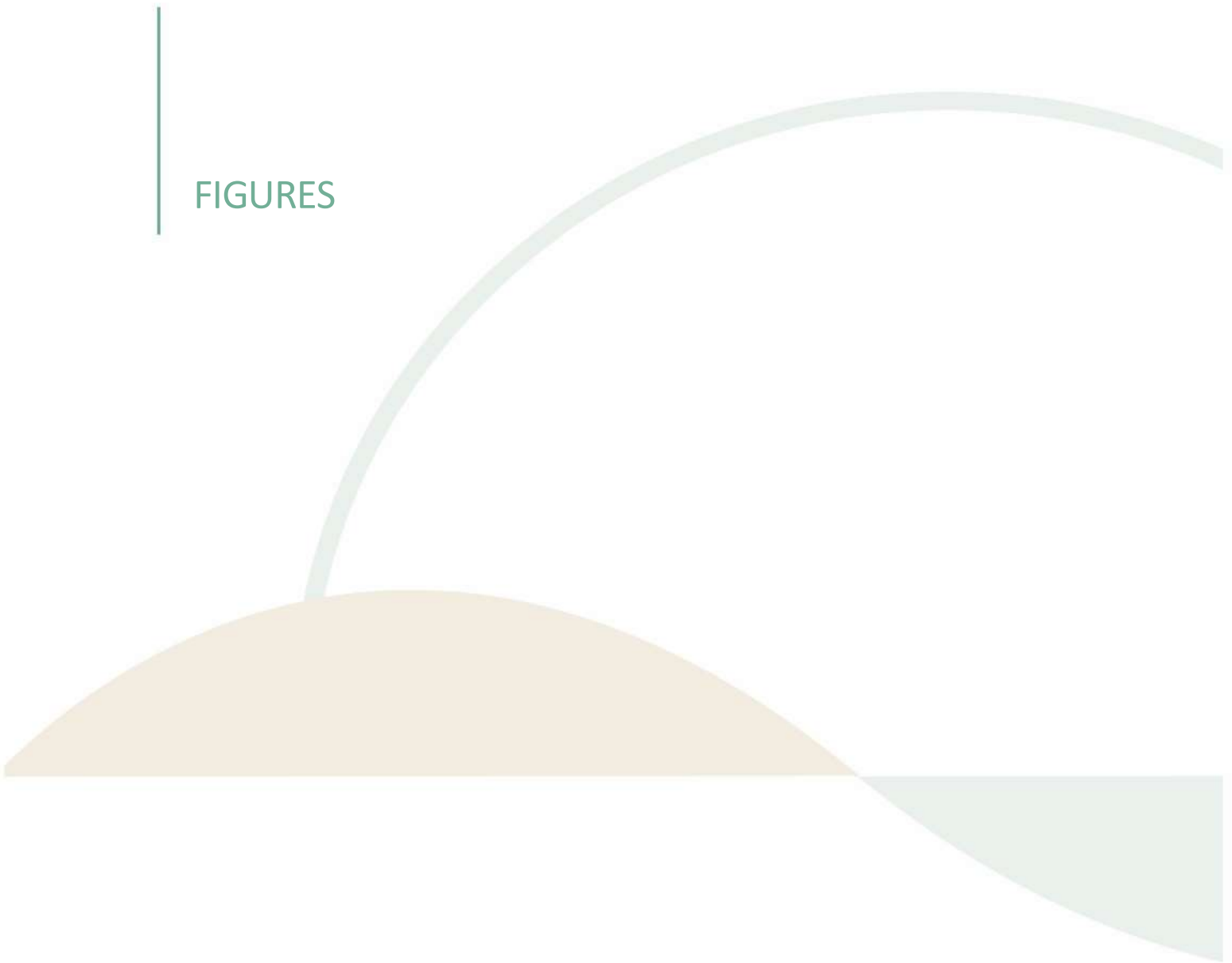
- Sussex County Planning Board Approval
- NJDEP DLUR Freshwater Wetlands Permits
- NJDEP DLUR Flood Hazard Area Verification

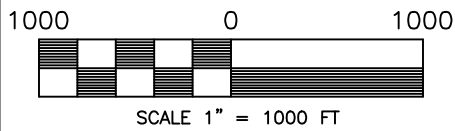
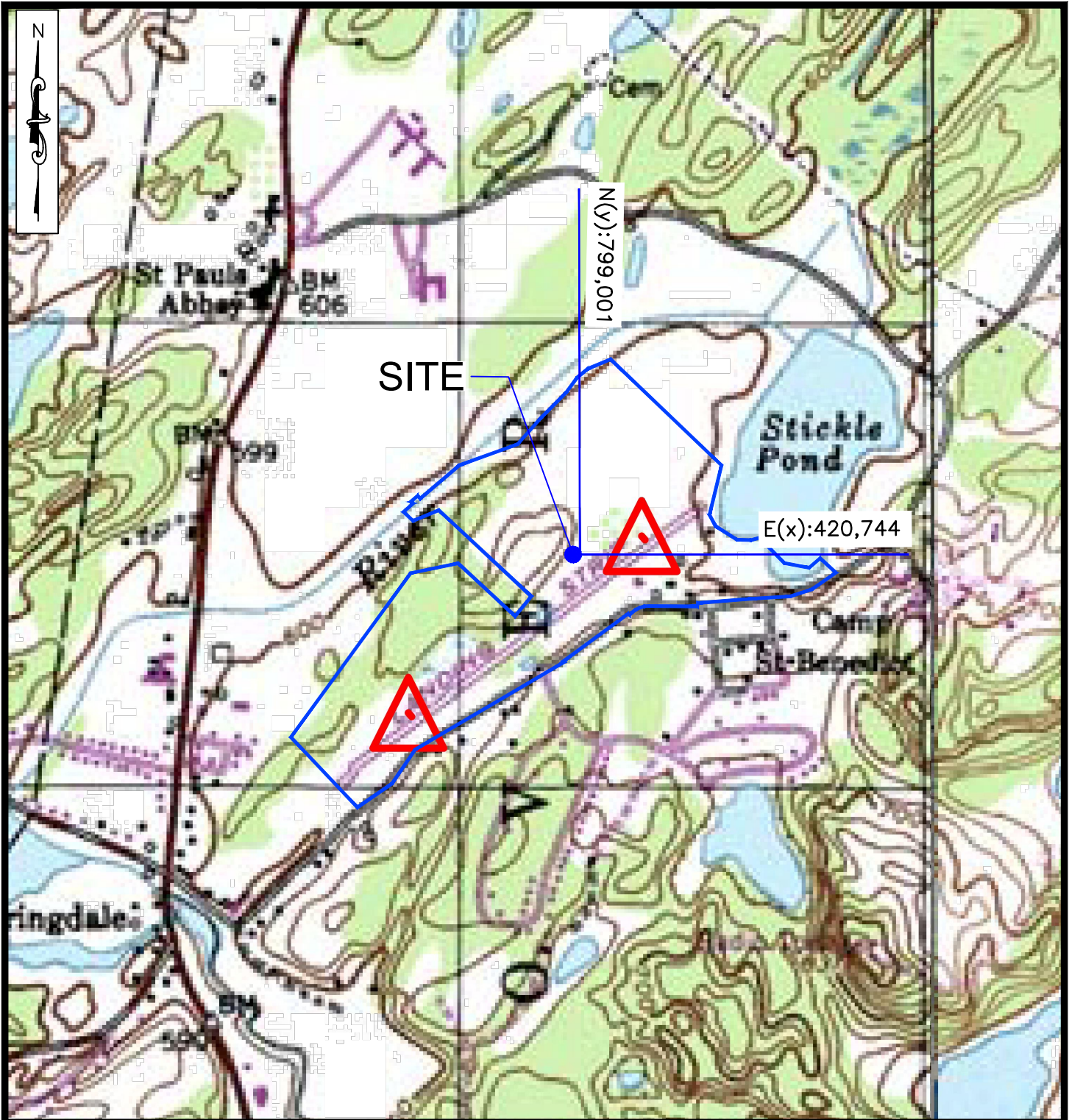
6. DOCUMENTATION

The Township of Andover Ordinances were reviewed as part of the preparation of this report. GIS mapping as provided by the NJDEP through its GeoWeb service was consulted during the preparation of the report. United States Environmental Protection Agency Air Quality Data was consulted for 2019 Air Quality Index. Additionally, the applicant was consulted throughout the design process.



FIGURES





TITLE:

USGS MAP



140 WEST MAIN STREET HIGH BRIDGE, NJ 08829
(908) 238-0544 FAX: (908)238-9572
C.O.A. #: 24GA28021500
A PROFESSIONAL ASSOCIATION

LOCATION:

248 STICKLES POND RD
BLOCK 151 LOT 21
ANDOVER TOWNSHIP
SUSSEX COUNTY, NJ

DATE: 9/6/2019

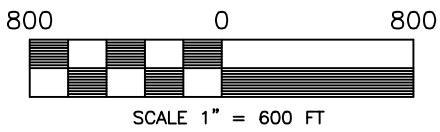
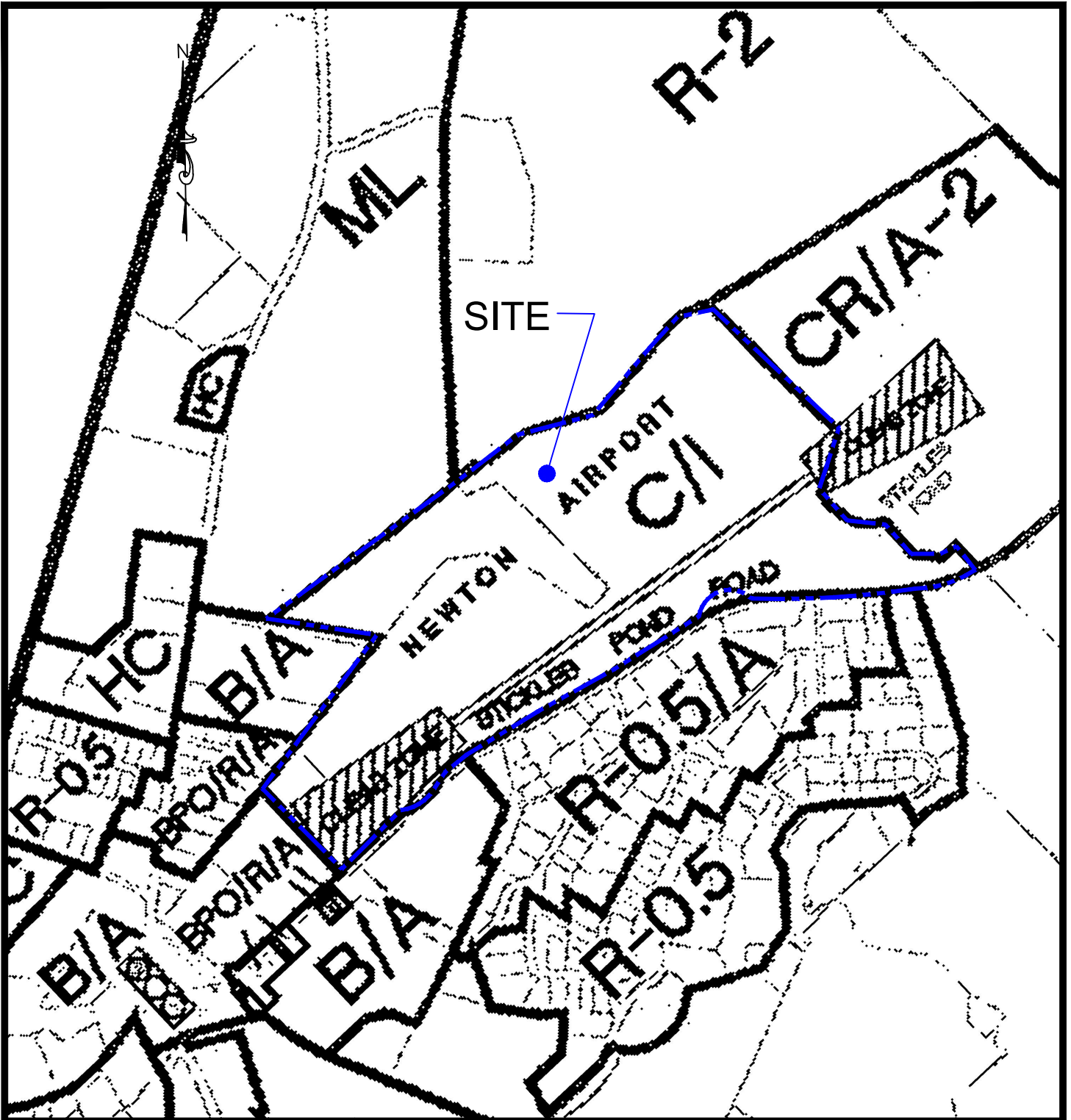
PROJECT NO.: 0119134

FILENAME: USGS.DWG

FIGURE No.

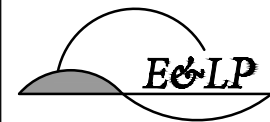
1

REFERENCES: USGS NEWTON WEST QUAD



TITLE:

ZONING MAP



140 WEST MAIN STREET HIGH BRIDGE, NJ 08829
 (908) 238-0544 FAX: (908)238-9572
 C.O.A. #: 24GA28021500
 A PROFESSIONAL ASSOCIATION

LOCATION:

248 STICKLES POND RD
 BLOCK 151 LOT 21
 ANDOVER TOWNSHIP
 SUSSEX COUNTY, NJ

DATE: 9/6/2019

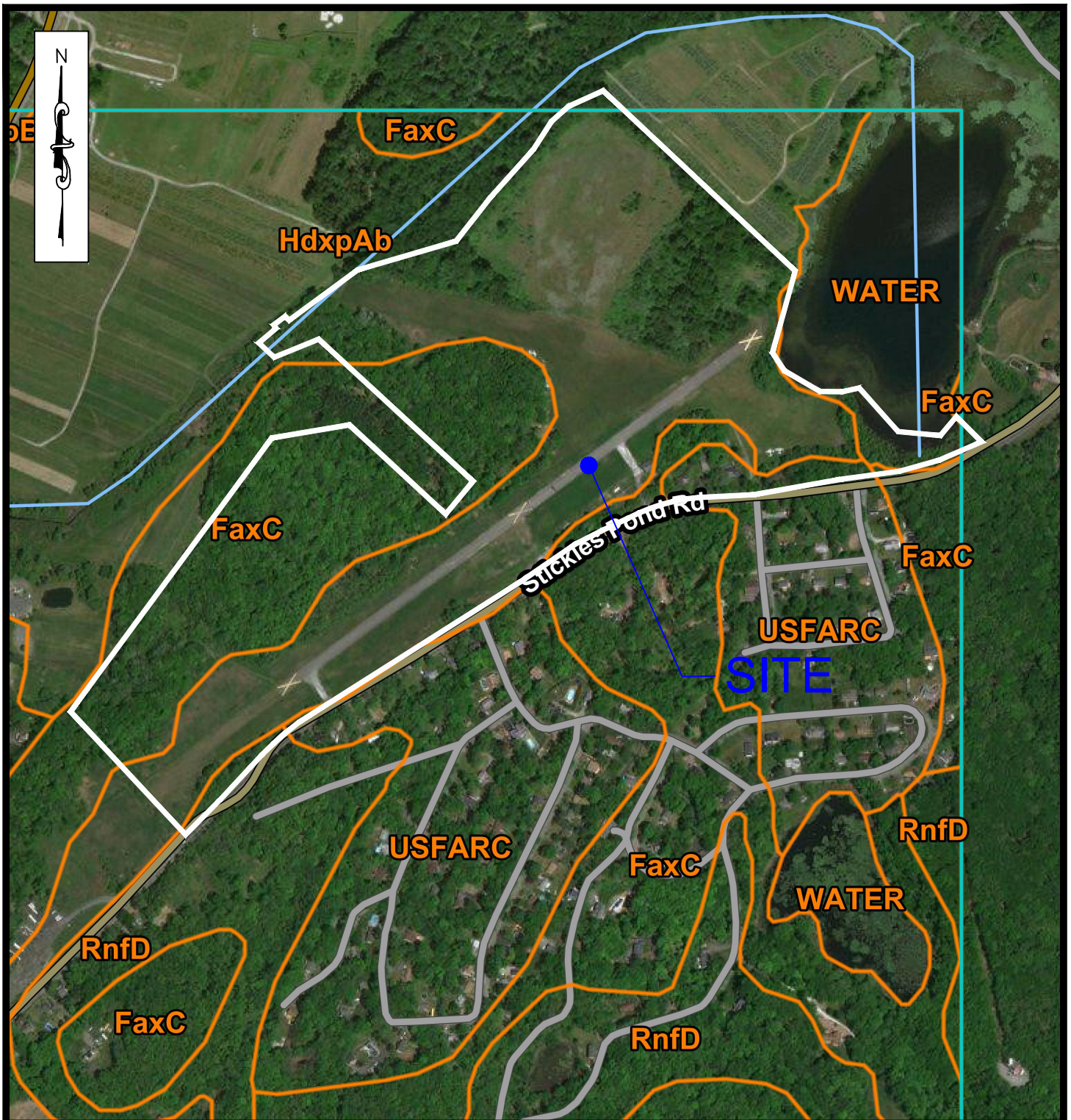
PROJECT NO.: 0119134

FILENAME: ZONING.DWG

FIGURE No.

2

REFERENCES: TOWNSHIP OF ANDOVER TAX MAP SHEETS 21, 21.01, 22, & 24

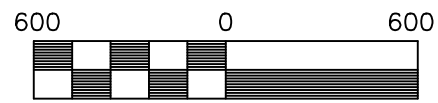


SOILS

FaxC: FARMINGTON-ROCK OUTCROP COMPLEX, 0 TO 15 PERCENT SLOPES

HdxpAb: HAZEN-PAULINS KILL COMPLEX, 0 TO 3 PERCENT SLOPES, VERY STONY

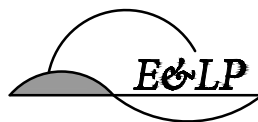
USFARC: URBAN LAND-FARMINGTON-ROCK OUTCROP COMPLEX, 0 TO 15 PERCENT SLOPES



SOURCE:
WEB SOIL SURVEY

TITLE:

SOIL MAP



140 WEST MAIN STREET HIGH BRIDGE, NJ 08829
(908) 238-0544 FAX: (908)238-9572
C.O.A. #: 24GA28021500

A PROFESSIONAL ASSOCIATION

LOCATION:

248 STICKLES POND RD
BLOCK 151 LOT 21
ANDOVER TOWNSHIP
SUSSEX COUNTY, NJ

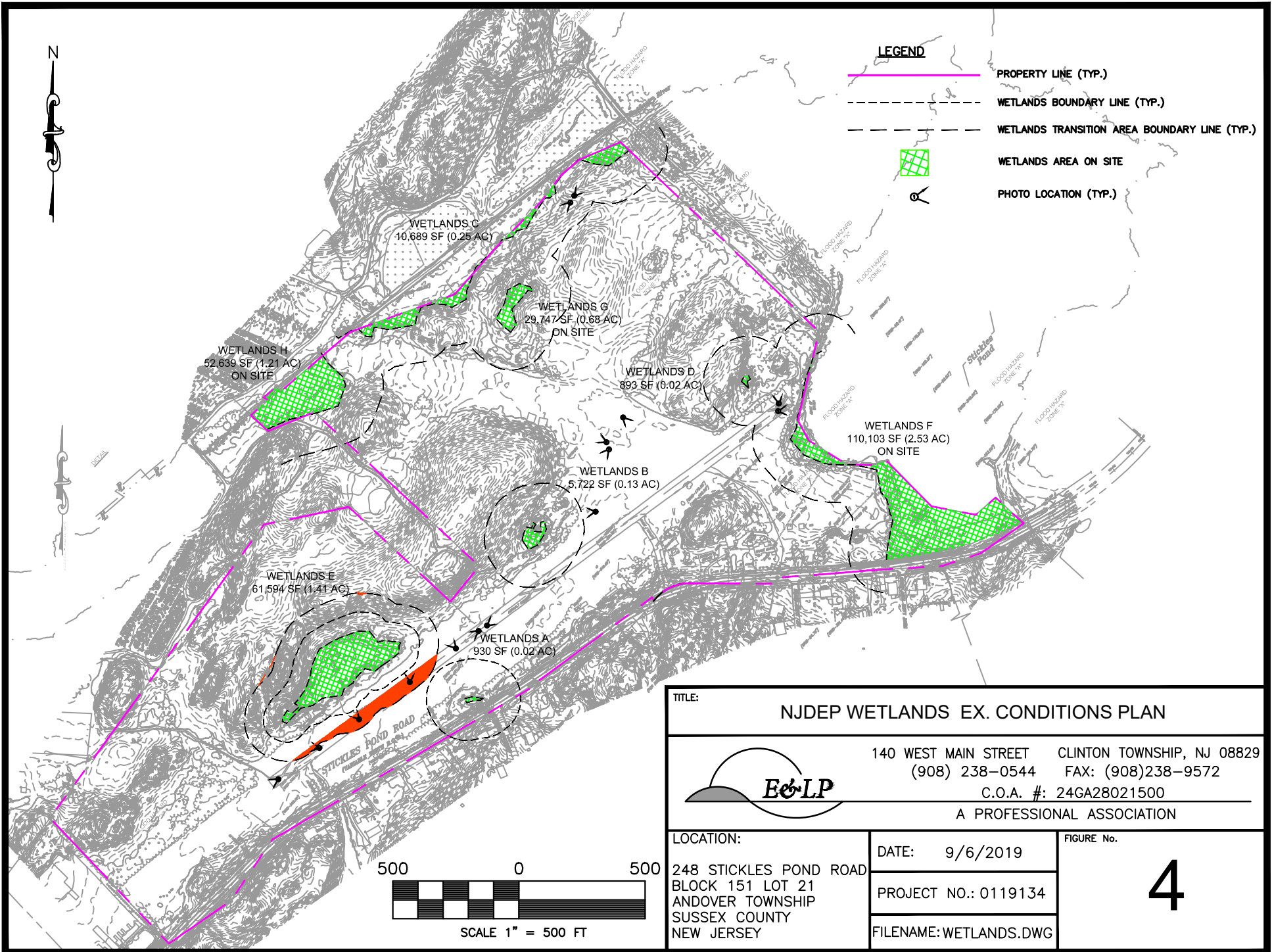
DATE: 9/6/2019

PROJECT NO.: 0119134






FILENAME: SOIL.dwg

FIGURE No.

3



LEGEND

-  PROPERTY LINE (TYP.)
-  WETLANDS BOUNDARY LINE (TYP.)
-  WETLANDS TRANSITION AREA BOUNDARY LINE (TYP.)
-  WETLANDS AREA ON SITE
-  PHOTO LOCATION (TYP.)

WETLANDS C
10,689 SF (0.25 AC)

WETLANDS G
29,747 SF (0.68 AC)
ON SITE

WETLANDS D
893 SF (0.02 AC)

WETLANDS F
110,103 SF (2.53 AC)
ON SITE

WETLANDS B
5,722 SF (0.13 AC)

WETLANDS E
61,594 SF (1.41 AC)

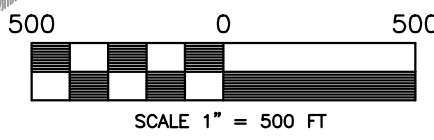
WETLANDS A
930 SF (0.02 AC)

WETLANDS H
52,639 SF (1.21 AC)
ON SITE

TITLE: NJDEP WETLANDS EX. CONDITIONS PLAN

140 WEST MAIN STREET CLINTON TOWNSHIP, NJ 08829
(908) 238-0544 FAX: (908)238-9572
C.O.A. #: 24GA28021500
A PROFESSIONAL ASSOCIATION

LOCATION: 248 STICKLES POND ROAD BLOCK 151 LOT 21 ANDOVER TOWNSHIP SUSSEX COUNTY NEW JERSEY	DATE: 9/6/2019	FIGURE No. 4
	PROJECT NO.: 0119134	
	FILENAME: WETLANDS.DWG	





APPENDIX A: SITE PLANS
(ATTACHED SEPARATELY)





**APPENDIX B: STORMWATER
MANAGEMENT REPORT
(ATTACHED SEPARATELY)**

