

O'REILLY AUTO PARTS (SITE & BUILDING SHELL ONLY)

DOLTON PLAZA

1317 E. SIBLEY BLVD., DOLTON, IL 60419

FOR: MERRILL PROPERTY GROUP, LLC

200 W. MADISON ST. SUITE 4200

CHICAGO, IL 60606

SPECIFICATIONS

The drawings and specifications are intended to illustrate and describe a complete job in every respect. Contractors are cautioned to familiarize themselves with existing conditions on the premises as, after contracts are signed, no extras will be allowed for any labor and/or materials necessary to complete the work.

CONDITIONS

- I-1 THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENTS A-201, LATEST EDITION, ARE ADOPTED AS PART OF THE CONTRACT DOCUMENTS AND SHALL GOVERN ALL DIVISIONS AND SECTIONS OF THE SPECIFICATIONS AND THE WORK.
- I-2 THE WORK, INCLUDING LABOR AND MATERIALS, SHALL COMPLY WITH THE FOLLOWING:
 - THESE DRAWINGS & SPECIFICATIONS
 - ALL APPLICABLE CODES, ORDINANCE AND REGULATIONS, STATE AND LOCAL,
 - MANUFACTURER'S SPECS, AND TRADE ASSOCIATION RECOMMENDATIONS,
 - INDUSTRY ACCEPTED ENGINEERING AND CONSTRUCTION PRACTICES.
- I-3 DRAWINGS & SPECIFICATIONS ARE, AND SHALL BE CONSIDERED AS COOPERATIVE AND CONSONANT. WORK MENTIONED OR INDICATED ON ONE AND NOT THE OTHER SHALL BE INCLUDED AND SUPPLIED AS THOUGH FULLY COVERED BY BOTH. IN CASE OF OVERLAPPING OR CONFLICTING REQUIREMENTS, THE MOST STRINGENT (GENERALLY MOST COSTLY) APPLIES AND WILL BE ENFORCED. ONLY ITEMS DEFINITELY NOTED "NOT IN CONTRACT," "N.C." "BY OTHERS," OR "BY OWNER," ARE NOT INCLUDED IN THE CONTRACT.
- I-4 THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPERINTENDENCE OF THE JOB AT ALL TIMES DURING CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK ALL THE WORK OF ALL TRADES TO SEE THAT IT IS BEING PROVIDED IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IF ANY DISCREPANCIES OCCUR IN ANY OF THE WORK.
- I-5 THE CONTRACTOR SHALL SUBMIT A SWORN CONTRACTOR'S AFFIDAVIT INCLUDING THE NAMES OF ALL PARTIES FURNISHING MATERIALS AND LABOR, AND SHALL ALSO SUBMIT PARTIAL AND FINAL WAIVERS. SUB-CONTRACTORS SHALL SUBMIT PARTIAL WAIVERS OF LIEN, OR FINAL WAIVERS, IN AMOUNT AT LEAST EQUAL TO THE NET PAYOUT REQUEST.
- I-6 THE CONTRACTOR SHALL PURCHASE INSURANCE PRODUCTS IN THE FOLLOWING MANNER AND AMOUNTS:
 - GENERAL LIABILITY \$2,000,000 MIN. EA. OCCURENCE WITH A GENERAL AGGREGATE LIMIT OF \$4,000,000.
 - AUTO LIABILITY \$1,000,000 MIN.
 - EXCESS UMBRELLA LIABILITY \$3,000,000 MIN.
 - WORKMANS COMP. IN THE REQUIRED STATUTORY AMOUNT, NO LESS THAN \$500,000.
 - HOLD HARMLESS THE OWNER & ARCHITECT, FOR DAMAGE TO PROPERTY AND/OR PERSONNEL INJURIES ARISING FROM THE WORK, FROM ALL CLAIMS OR LOSSES.
 - IMMEDIATELY PROVIDE G & H WITH THREE COPIES OF EACH CERTIFICATE OF INSURANCE THAT NAME G & H DEVELOPERS CORPORATION AND OWNER OF RECORD AS ADDITIONAL INSURED ON A PRIMARY, NON-CONTRIBUTORY BASIS, UNDER AN OCCURRENCE BASED POLICY IN THE AMOUNTS ABOVE AND WITH A WAIVER OF SUBROGATION ENDORSEMENT IN FAVOR OF SUCH ADDITIONAL INSURED, ALONG WITH DESIGNATING THE LOCATION AND NAME OF THE PROJECT UNDER DESCRIPTION ON THIS CERTIFICATE. PAYMENT FOR YOUR FIRST BILLING WILL NOT BE RELEASED UNTIL A CERTIFICATE AND COMPLETE CERTIFICATE IS RECEIVED. ALSO, YOU ARE REQUIRED TO DEFEND, INDEMNIFY AND HOLD HARMLESS G & H DEVELOPERS CORPORATION FROM ANY LOSS, DAMAGE, COST OR EXPENSE (INCLUDING REASONABLE ATTORNEYS' FEES) DUE TO ANY BREACH OF YOUR SUBCONTRACT, OR NEGLIGENCE, BY YOU OR YOUR AGENTS, EMPLOYEES OR SUB-SUBCONTRACTORS.
- I-7 ON SITE VERIFICATION OF ALL DIMENSION & CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE DRAWINGS ARE REASONABLY ACCURATE FOR FIGURING PURPOSES ONLY. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR QUESTIONS ARISING FROM JOB CONDITIONS OR THESE DRAWINGS
- I-8 DO NOT SCALE DRAWINGS
- I-9 COST OF WORK SHALL INCLUDE ALL SALES TAXES. CONTRACTOR SHALL PAY FOR PERMIT.
- I-10 SUBSTITUTIONS AND EXTRAS ONLY FOR WORK APPROVED IN WRITING BY OWNER AND ARCHITECT.
- I-11 THE OWNER WILL MAINTAIN A BUILDER'S RISK FIRE INSURANCE POLICY WITH EXTENDED COVERAGE PLUS VANDALISM AND MALICIOUS MISCHIEF COVERAGE.
- I-12 CONTRACTOR SHALL REMOVE ALL DEBRIS AND LEAVE THE JOB BROOM CLEAN.
- I-13 THE WORK SHALL BE GUARANTEED FOR ONE YEAR FROM COMPLETION AND APPROVAL DATE UNLESS NOTED OTHERWISE HEREIN.

GENERAL NOTES

1. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A-201, CURRENT EDITION, ARE ADOPTED AS PART OF THE CONTRACT DOCUMENTS AND SHALL GOVERN ALL DIVISIONS AND SECTIONS OF THE SPECIFICATIONS AND THE WORK.
2. THE CONTRACTOR SHALL INSPECT AND VERIFY ALL DIMENSIONS AND CONDITIONS OF THE SITE AND REPORT ANY DISCREPANCIES FROM THESE DRAWINGS TO THE ARCHITECT.
3. THE MEASUREMENTS ON THESE DRAWINGS ARE REASONABLY ACCURATE FOR THE PURPOSE OF FIGURING. HOWEVER, IN THE EXECUTION OF WORK ON THE JOB, EACH CONTRACTOR IS TO VERIFY ALL DIMENSIONS WITH ACTUAL CONDITIONS.
4. DO NOT SCALE DRAWINGS.
5. INTERIOR PARTITIONS SHALL BE CONSTRUCTED OF METAL STUDS SIZE AND SPACING NOTED ON DRAWINGS WITH 3/8" FIRE CODE 'C' GYPSUM BOARD BOTH SIDES OR CONCRETE BLOCK AS NOTED ON THE DRAWINGS.
6. ALL WALL DIMENSIONS SHOWN ON PLANS ARE NOMINAL DIMENSIONS UNLESS OTHERWISE NOTED.
7. PROVIDE Headers BLOCKING AND/OR FRAMING AS REQUIRED FOR SUPPORT OF ALL ELECTRICAL FIXTURES, SHELVING, DUCT REGISTERS AND MILLWORK.
8. ALL INTERIOR FINISHES SHALL COMPLY WITH CLASS 2 FLAME SPREAD OF 26-75.
9. NOT USED.
10. ALL EXIT DOOR HARDWARE TO BE KEYLESS IN THE DIRECTION OF EGRESS.
11. PROVIDE CONTROL JOINTS IN DRYWALL FURRING SYSTEMS WHERE CONTROL JOINTS OCCUR IN THE EXTERIOR WALL, AND AT MAXIMUM 30 FEET ON CENTER IN BOTH DRYWALL PARTITIONS AND FURRING SYSTEMS.

CONTRACTOR RESPONSIBILITY NOTES

1. PLUMBING CONTRACTOR IS RESPONSIBLE FOR GAS PIPING - SEE MECH. DRAGGS.
2. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY POWER

SPECIAL INSPECTIONS

1. THE GENERAL CONTRACTOR SHALL COORDINATE THE FIELD ACTIVITIES IN ORDER TO PERMIT THIRD PARTY INSPECTION / TESTING SERVICES ORGANIZATION TIMELY ACCESS TO THE CONSTRUCTION SITE IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
2. THE TESTING SERVICE SHALL BE RETAINED BY THE CONTRACTOR TO PERFORM ALL INSPECTIONS AND TESTS REQUIRED, INCLUDING THE FOLLOWING:
 - A. FIELD TEST FOUNDATION SUBGRADES AND COMPAKTED FILL LAYERS.
 - B. PERFORM CONCRETE COMPRESSION STRENGTH TESTS, SLUMP TESTS, AND REVIEW CONCRETE MIX DESIGNS.
 - C. OBSERVE INSTALLATION OF FOOTINGS AND REINFORCING STEEL.
 - D. OBSERVE INSTALLATION OF STRUCTURAL STEEL COLUMNS, BEAMS, AND JOISTS, VERIFYING COMPLIANCE WITH BOLTING AND WELDING REQUIREMENTS.
 - E. OBSERVE INSTALLATION OF MASONRY CONSTRUCTION.
 - F. OBSERVE INSTALLATION OF AGGREGATE PIER SOIL ENHANCEMENT
3. APPROVED AGENCY TO PERFORM THESE INSPECTIONS SHALL BE:

EOS Midwest, LLC
9824 Industrial Drive, Unit C, Bridgeview, IL 60455
T: 708-430-1071
www.eosimilited.com <http://www.eosimilited.com>
4. COPIES OF REPORTS SHALL BE DISTRIBUTED AS FOLLOWS:
 - A. ONE (1) COPY TO THE ARCHITECT
 - B. ONE (1) COPY TO THE OWNER
 - C. ONE (1) COPY TO THE CONTRACTOR
 - D. TWO (2) COPIES TO THE BUILDING DEPARTMENT

PROJECT DATA BUILDING INFORMATION

*2012 INTERNATIONAL BUILDING CODE	
*2014 ILLINOIS PLUMBING CODE	
*2011 NATIONAL ELECTRICAL CODE	
*2012 INTERNATIONAL FIRE CODE	
*2012 INTERNATIONAL MECHANICAL CODE	
*2010 INTERNATIONAL ENERGY CONSERVATION CODE	
ILLINOIS ACCESSIBILITY CODE	
*W/ CITY AND/OR STATE CODE AMENDMENTS	
USE GROUP:	M-MERCANTILE
CONSTRUCTION TYPE:	SB
ALLOWABLE AREA PER SECTIONS 503 & 506 AND TABLE 506.2:	
FRONTAGE INCREASE (0.485 x 9,000)	9,000 SF.
TOTAL ALLOWABLE AREA	4,361 SF.
ACTUAL AREA:	13,368 SF.
ALLOWABLE HEIGHT PER SECTION 503, 504 AND TABLE 504.3:	
ALLOWABLE HEIGHT:	+40'
ACTUAL HEIGHT:	+25'-0" @ FASCIA HIGH POINT
BUILDING VOLUME:	126,438 C.F.
OCCUPANCY LOAD PER TABLE 1004.1.2	
60 SF. (GROSS) PER PERSON = 120 OCCUPANT LOAD	
EXIT CAPACITY: 120 x .15 = 18.025' REQ'D/ 108' PROVIDED	

SITE & ZONING INFORMATION

SEE ARCHITECTURAL SITE PLAN

NO EXTRAS WILL BE ALLOWED FOR ANY LABOR AND/OR MATERIALS NECESSARY TO COMPLETE THE WORK.

IN CASE OF OVERLAPPING OR CONFLICTING REQUIREMENTS, THE MOST STRINGENT (GENERALLY MOST COSTLY) APPLIES AND WILL BE ENFORCED.

VERIFY ANY & ALL WORK WITH GENERAL CONTRACTOR



LOCATION MAP
NO SCALE

THIS DRAWING		REVISIONS
FOR COORDINATION	3/13/19	1/1/21
FOR BIDDING	1/1/21	1/1/21
FOR PERMIT		
FOR CONTRACTING		
NOT FOR CONSTRUCTION		

LIST OF DRAWINGS

NO.	DATE	SHEET DESCRIPTION
T1	3/13/19	PROJECT DATA, DRAWING INDEX, GENERAL NOTES, SPECIFICATIONS
A0	1/1/21	ARCHITECTURAL SITE PLAN, RETAINING WALL/FENCE, DETAILS, NOTES
EG.1		ELECTRICAL SITE PLAN, SITE DETAILS
EG.2		ELECTRICAL PHOTOMETRIC PLAN
C1		CIVIL TITLE SHEET
C2		ALTA-NPS LAND TITLE SURVEY BY OTHERS
C3		EXISTING CONDITIONS & DEMOLITION PLAN
C4		GRADE PLAN
C5		TOPO PLAN
C6		MARD EXHIBIT
C7		SOIL EROSION AND SEDIMENT CONTROL PLAN
C8		CONSTRUCTION DETAILS
C9		CONSTRUCTION DETAILS
C10		CONSTRUCTION DETAILS
C11		CONSTRUCTION SPECIFICATIONS
L1		LANDSCAPE PLAN
L2		LANDSCAPE DETAILS
L3		LANDSCAPE SPECIFICATIONS
A1		FLOOR PLAN, DETAILS, NOTES
A2		ELEVATIONS, MASONRY NOTES, SCHEDULE
A3		MALL SECTIONS
A4		MALL SECTION DETAILS, BLOCKFLASH NOTES
A4.1		ROOF PLAN, ROOM FINISH & DOOR SCHEDULE
S1		FOUNDATION PLAN, DETAILS
S2		ROOF FRAMING PLAN
S2.1		DETAILS
P1		PLUMBING FLOOR PLAN, DETAILS, NOTES
M1		HVAC PLAN
M2		GAS PIPING PLAN
M3		HVAC & NOTES SCHEDULES
E1		ELECTRICAL RISER DIAGRAM, SCHEDULES, NOTES
E2		ELECTRICAL GENERAL PLAN, SCHEDULE, NOTES
E3		ELECTRICAL SPECIFICATIONS

O'REILLY AUTO PARTS
DOLTON PLAZA
1317 E. SIBLEY BLVD., DOLTON, IL 60419
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE
PROJECT DATA
DRAWINGS INDEX
NOTES & SPECIFICATIONS

1906
T1
T
1
EXPIRES 11/30/2020

STATEMENT OF ADA COMPLIANCE

I HAVE PREPARED, OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH ACCESSIBILITY CODES.

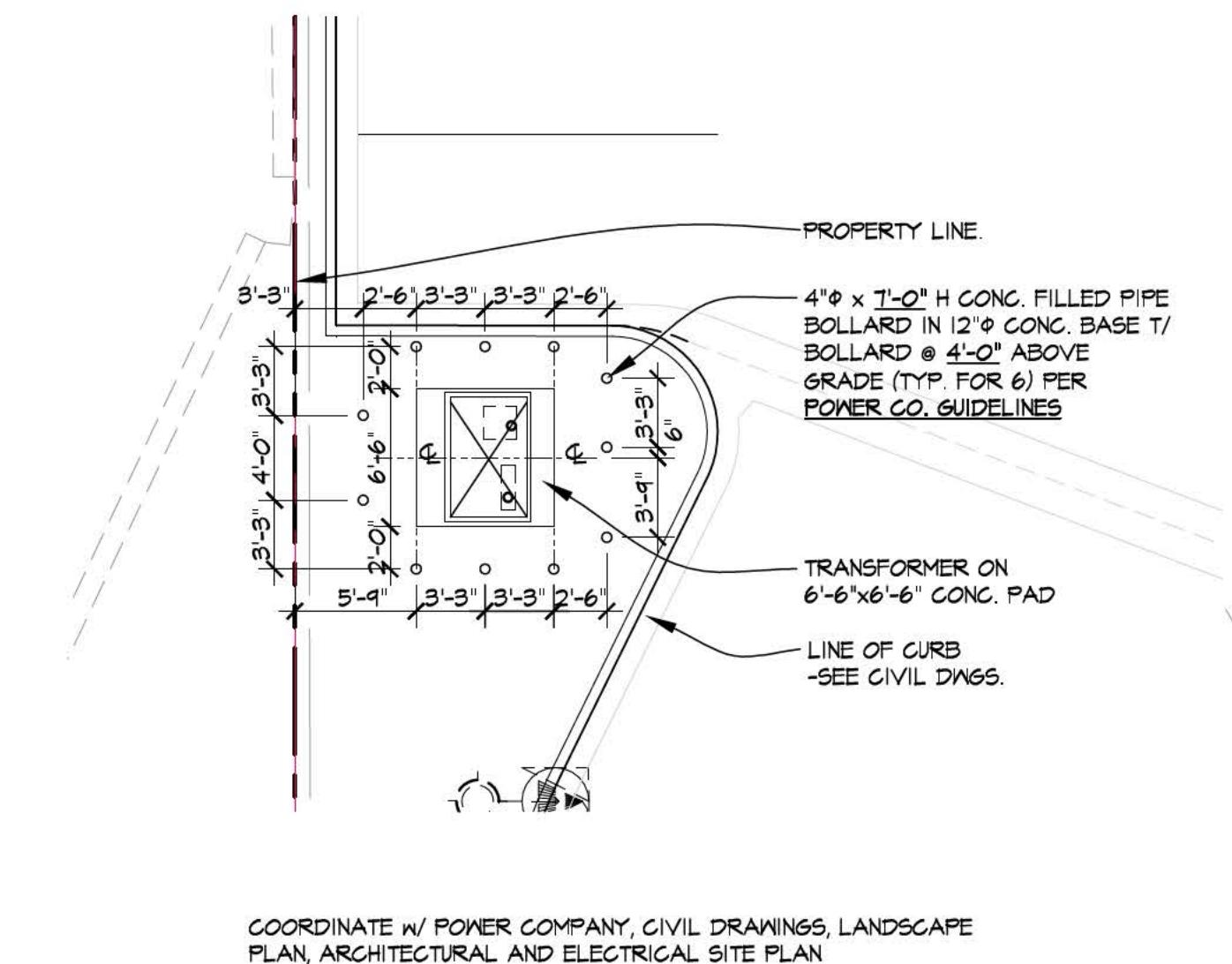
Signed: *David I. Mongurten* Date: 1/1/21
Principal Architect: David I. Mongurten
KMA & ASSOCIATES, INC., ARCHITECTS

CERTIFICATION STATEMENT

THIS IS TO CERTIFY THAT I AM A LICENSED ARCHITECT IN THE STATE OF ILLINOIS AND THAT THESE DRAWINGS WERE PREPARED UNDER MY PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE CONFORM TO ALL MUNICIPAL BUILDING AND ZONING REGULATIONS.

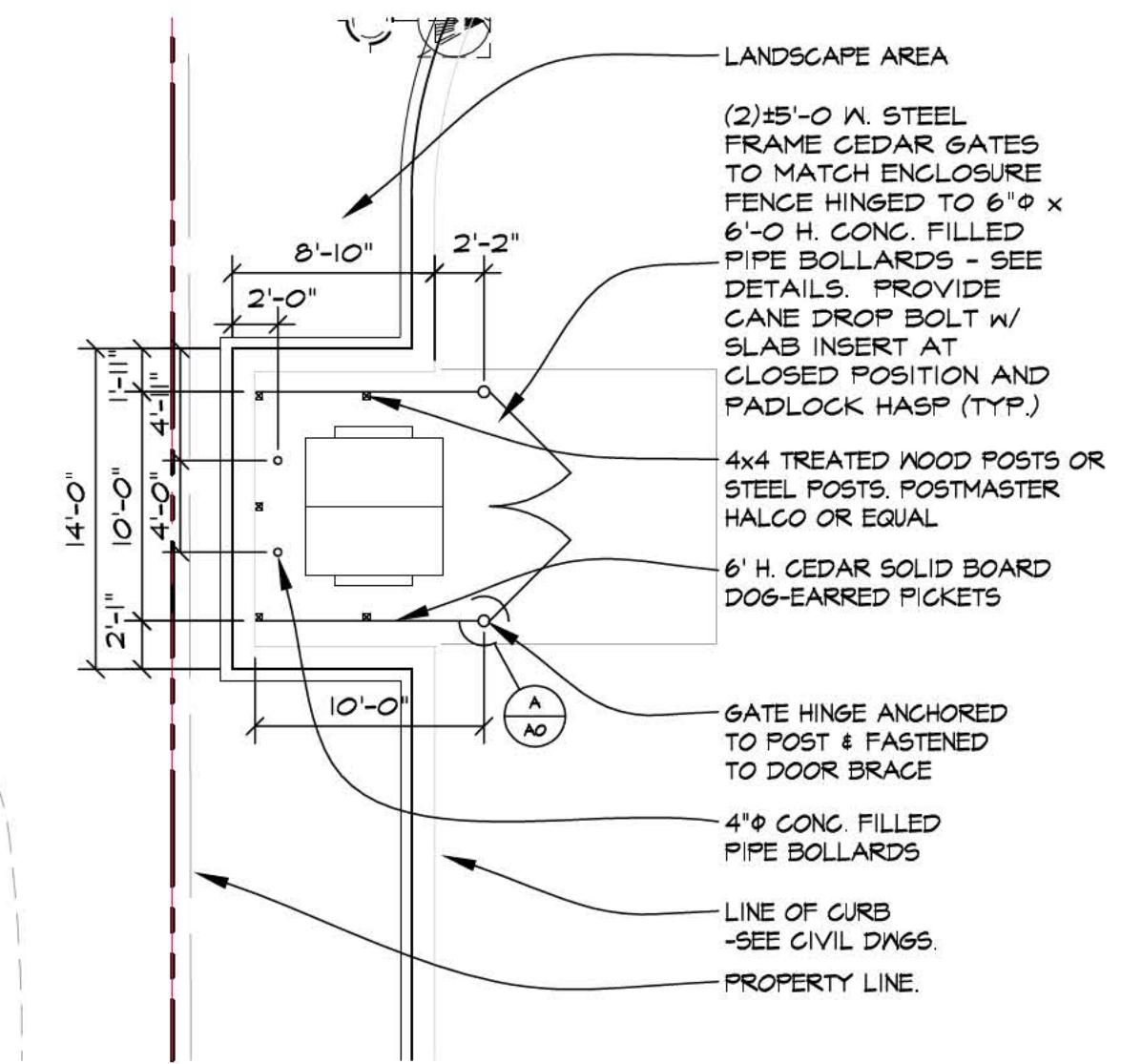
Signed: *David I. Mongurten* Date: 1/1/21
Principal Architect: David I. Mongurten
KMA & ASSOCIATES, INC., ARCHITECTS





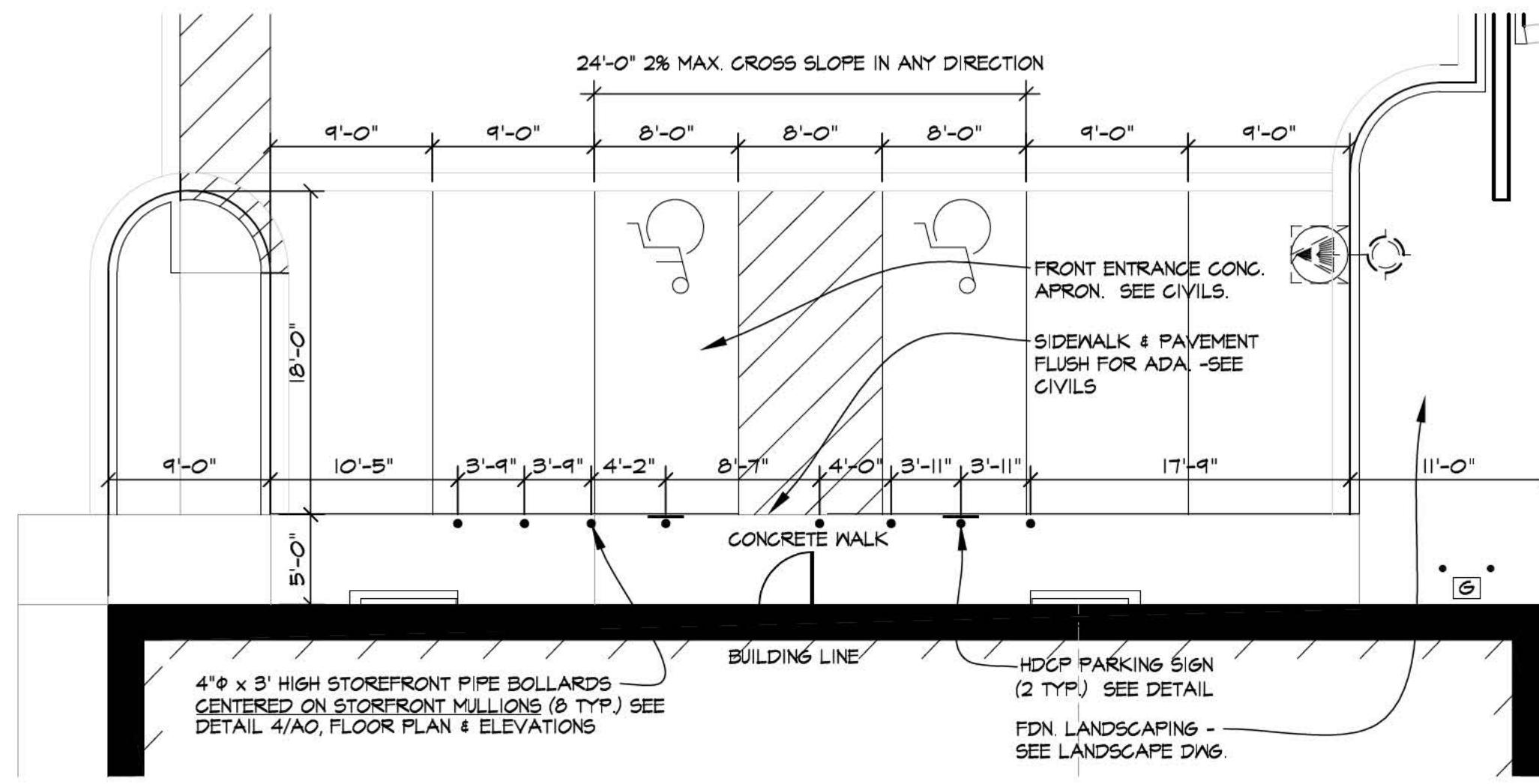
TRANSFORMER PAD DETAIL **5** **TRASH ENCLOSURE PLAN**

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



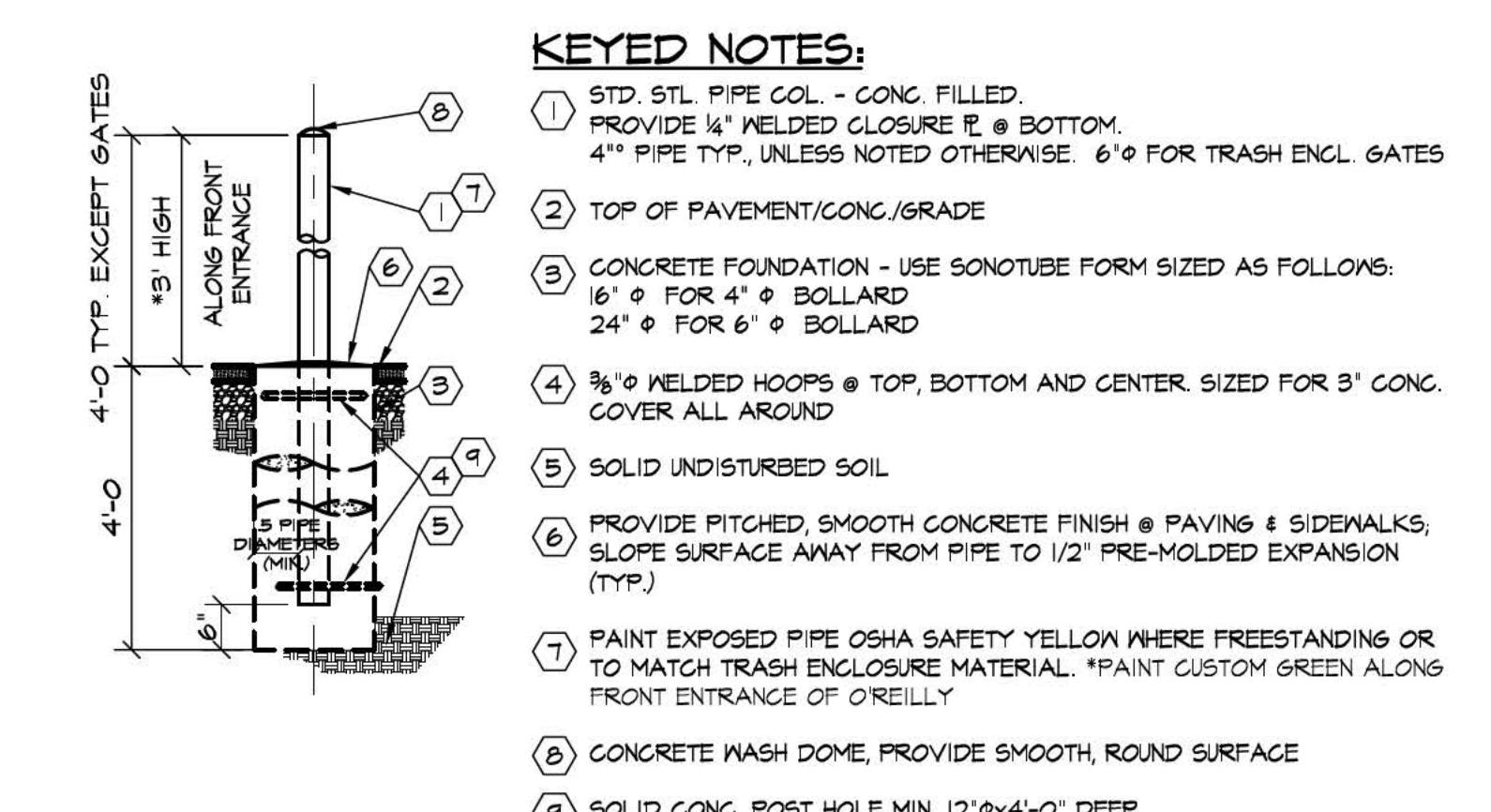
5 TRASH ENCLOSURE PLAN

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



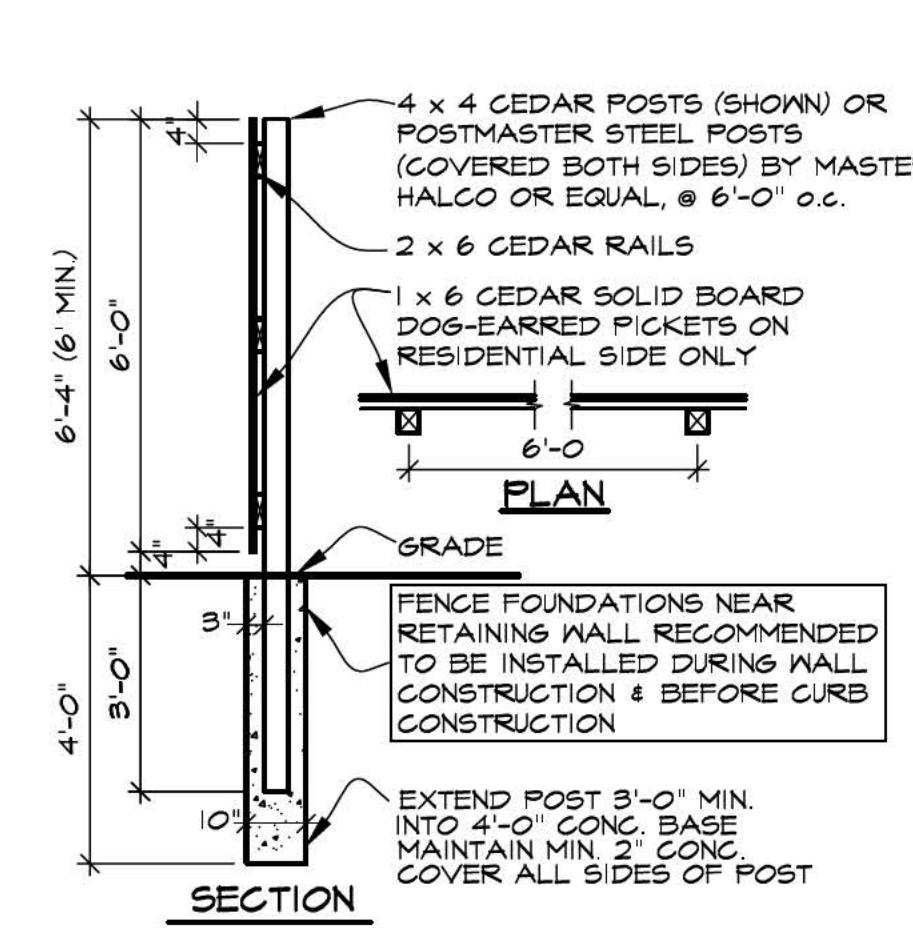
HANDICAP AREA TO BE ADA COMPLIANT. SLOPES SHALL NOT EXCEED 2% IN ANY
HANDICAP PARKING @ O'REILLY
SCALE 1/8" = 1' 0"

SCALE: 1/8" = 1



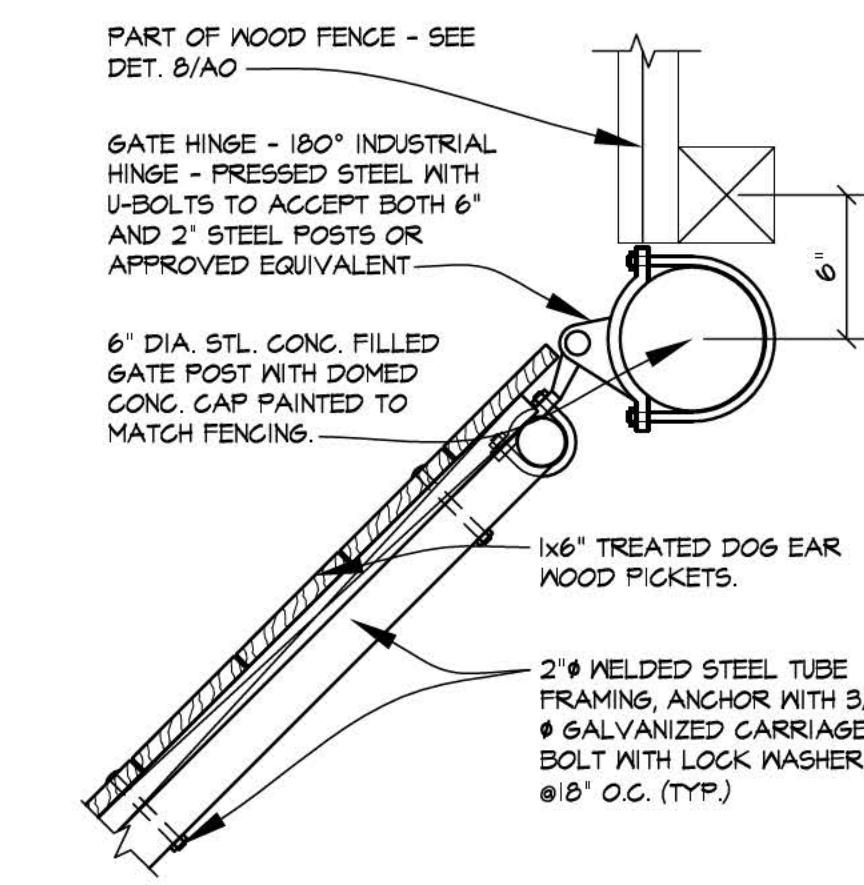
TYPICAL PIPE BUMPER GUARDS

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



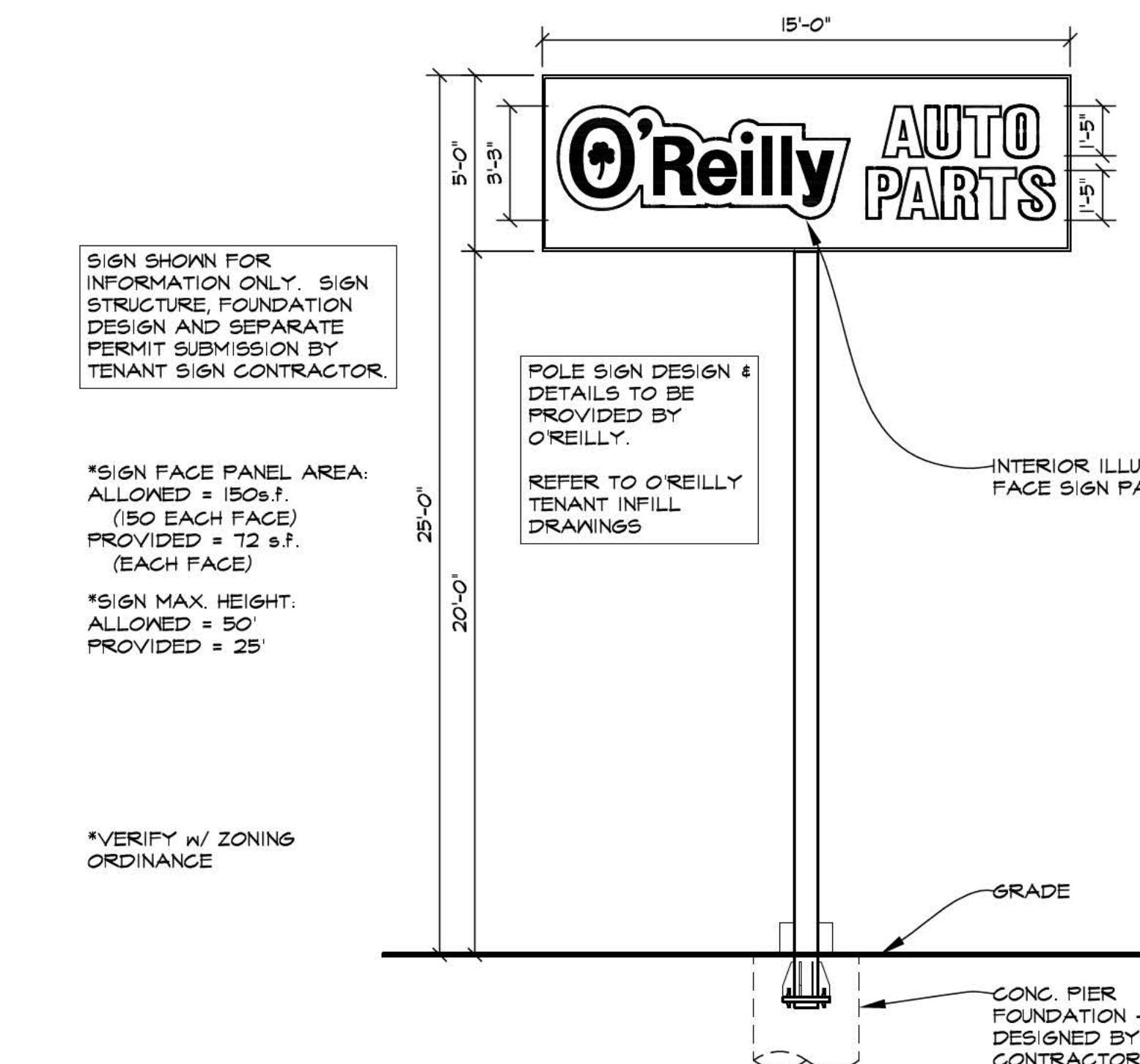
TRASH ENCLSR. FENCE DETAIL **8** SECTION @

SCALE: 3/8" =



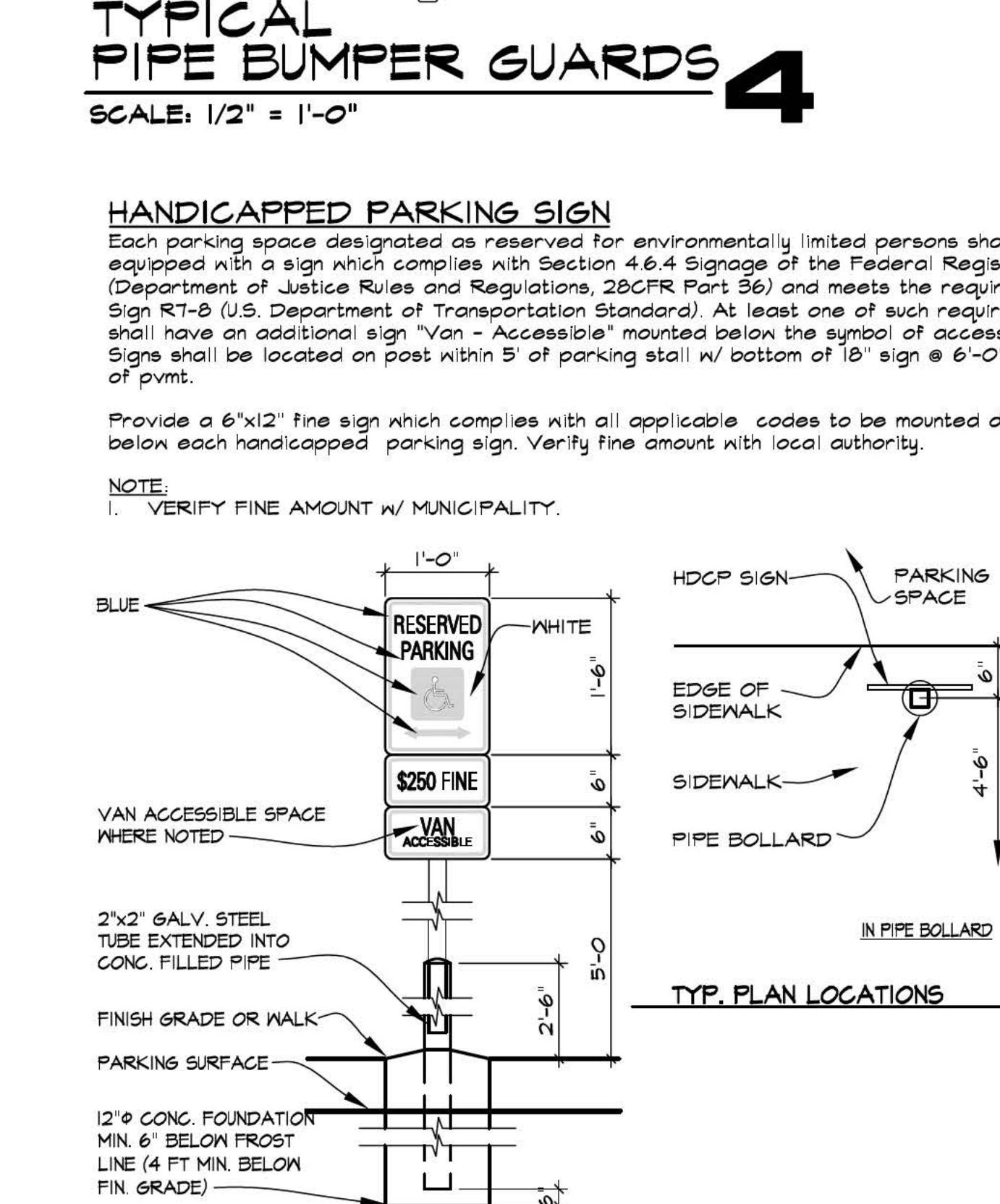
SECTION @ TRASH GATE POST

A



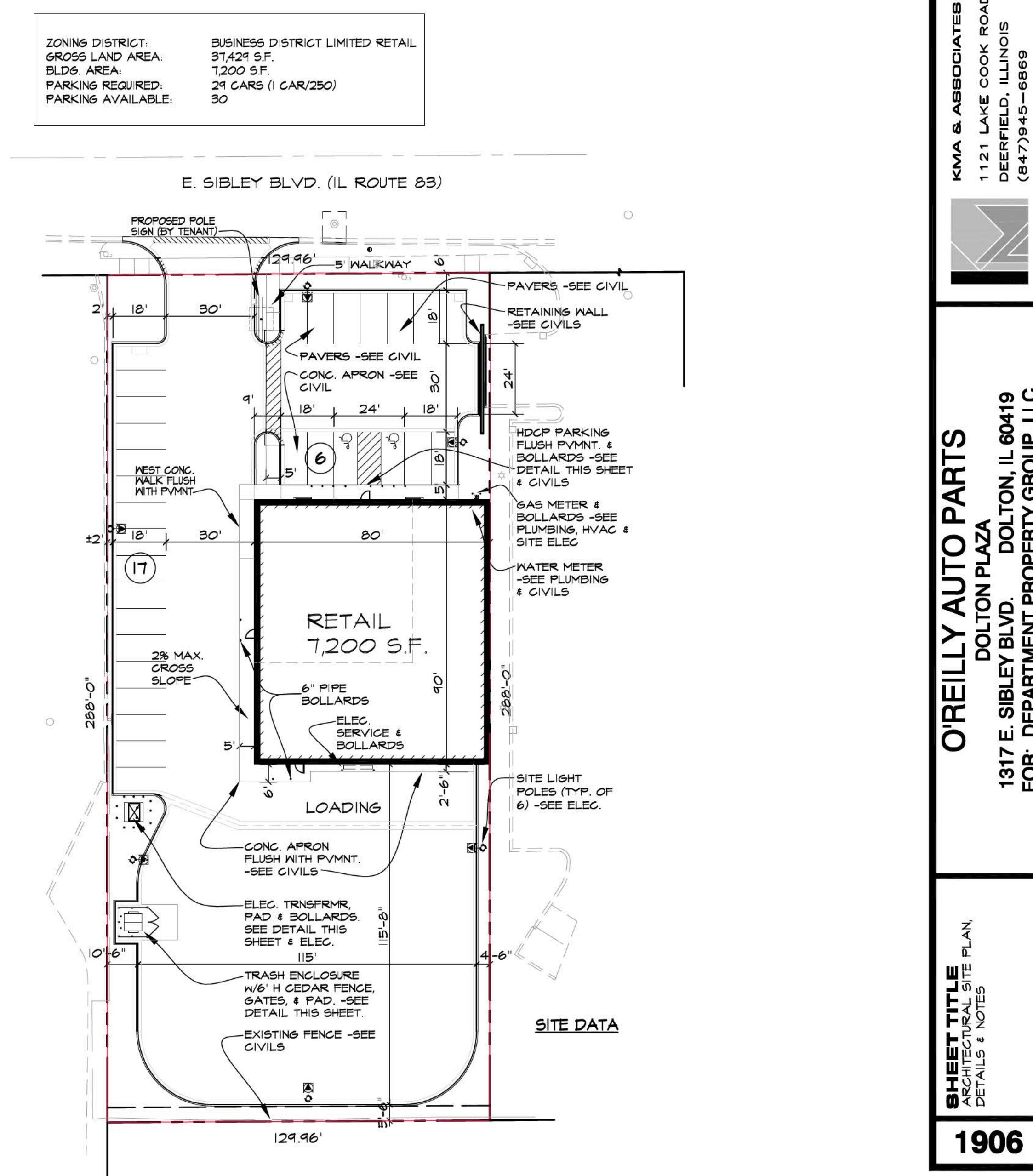
POLE SIGN ELEVATION

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



HDCP. PARKING SIGN

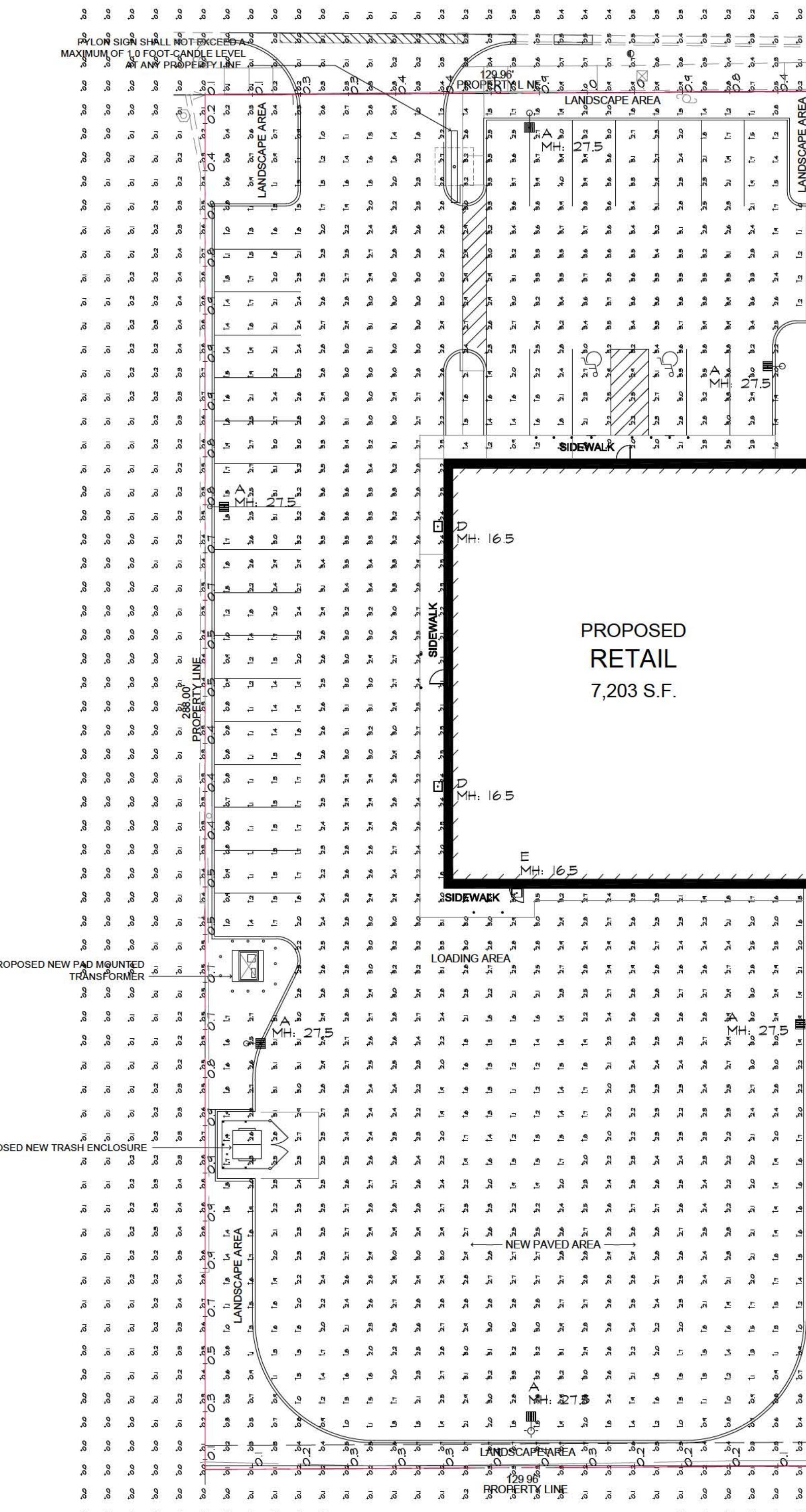
SCALE: 3/4" = 1'-0"



SITE PLAN

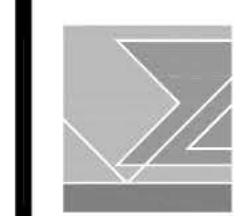
SCALE: 1" = 30'-0"

SIBLEY BLVD.



SHEET TITLE
ELECTRICAL SITE PLAN DETAILS
ELECTRICAL SITE PLAN

1906



KMA & ASSOCIATES, INC. ARCHITECTS

1121 LAKE COOK ROAD

DEERFIELD, ILLINOIS

(847) 945-6869

FAX:(847) 945-0284

REVISIONS

1/1/2019

1/1/2019

NOT FOR CONSTRUCTION

NOT FOR CONTRACTING

NOT FOR BIDDING

FOR PERMIT

FOR BIDDING

NOT FOR CONSTRUCTION

Calculation Summary							
Scene: L1							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING AREA	Illuminance	Fc	2.39	4.0	0.5	4.78	8.00
PROPERTY LINE	Illuminance	Fc	0.55	1.0	0.0	N.A.	N.A.

Luminaire Schedule							
Scene: L1							
Symbol	Qty	Label	Arrangement	Manufacturer	Description	Luminaire Watts	Arr. Lum. Lumens
	6	A	SINGLE	LSI INDUSTRIES	MRM-LED-18L-SIL-FT-40-UNV-70CRI-BRZ-IL	150	12149
	2	D	SINGLE	LSI INDUSTRIES	XWM-3-LED-03L-40-UE-BRZ	23	3144
	1	E	SINGLE	LSI INDUSTRIES	XWM-FT-LED-06L-40-UE-BRZ	45	6057

PARKING LOT DESIGN GUIDE		BASIC	BASIC ENHANCED SECURITY	SECURITY PUBLIC SPACES	HIGH SECURITY PUBLIC SPACES
MAXIMUM HORIZONTAL ILLUMINATION MEASURED ON PARKING SURFACE W/ NO SHADOW		2.0/ 0.2	5.0/ 0.5	10 0/ 1.0	30.0-60.0/ 3.0-6.0
UNIFORMITY RATIO MAXIMUM - TO - MINIMUM		20:1	15:1	15:1	4:1 - AVG/ MIN
MINIMUM VERTICAL ILLUMINATION MEASURED AT 5' ABOVE PARKING SURFACE FOR FACIAL RECOGNITION		1.0/ 0.1	2.5/ 0.25	5.0-8.0/ 0.5-0.8	12-60/ 1.2-6.0

RECOMMENDED BASED ON RP-33-99, RP20-98 IESNA LIGHTING HANDBOOK

NOTES:
See schedule for luminaire specifications.
Luminaire Symbols are not to scale.
Varying the position, mounting height,
or orientation from what is specified in this
drawing will invalidate the calculation performed.

REVISIONS

1/1/2019

1/1/2019

NOT FOR CONSTRUCTION

NOT FOR CONTRACTING

NOT FOR BIDDING

FOR PERMIT

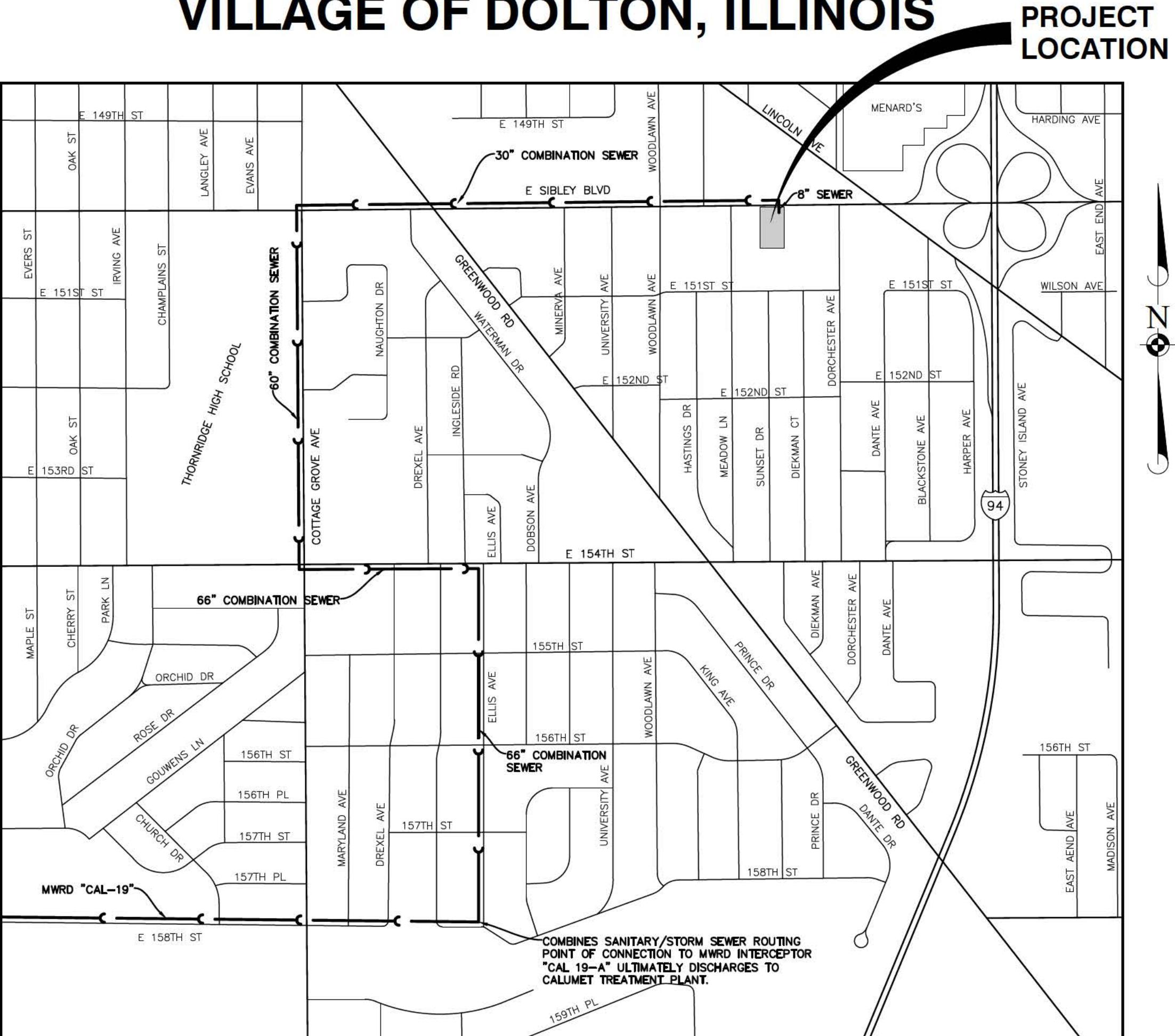
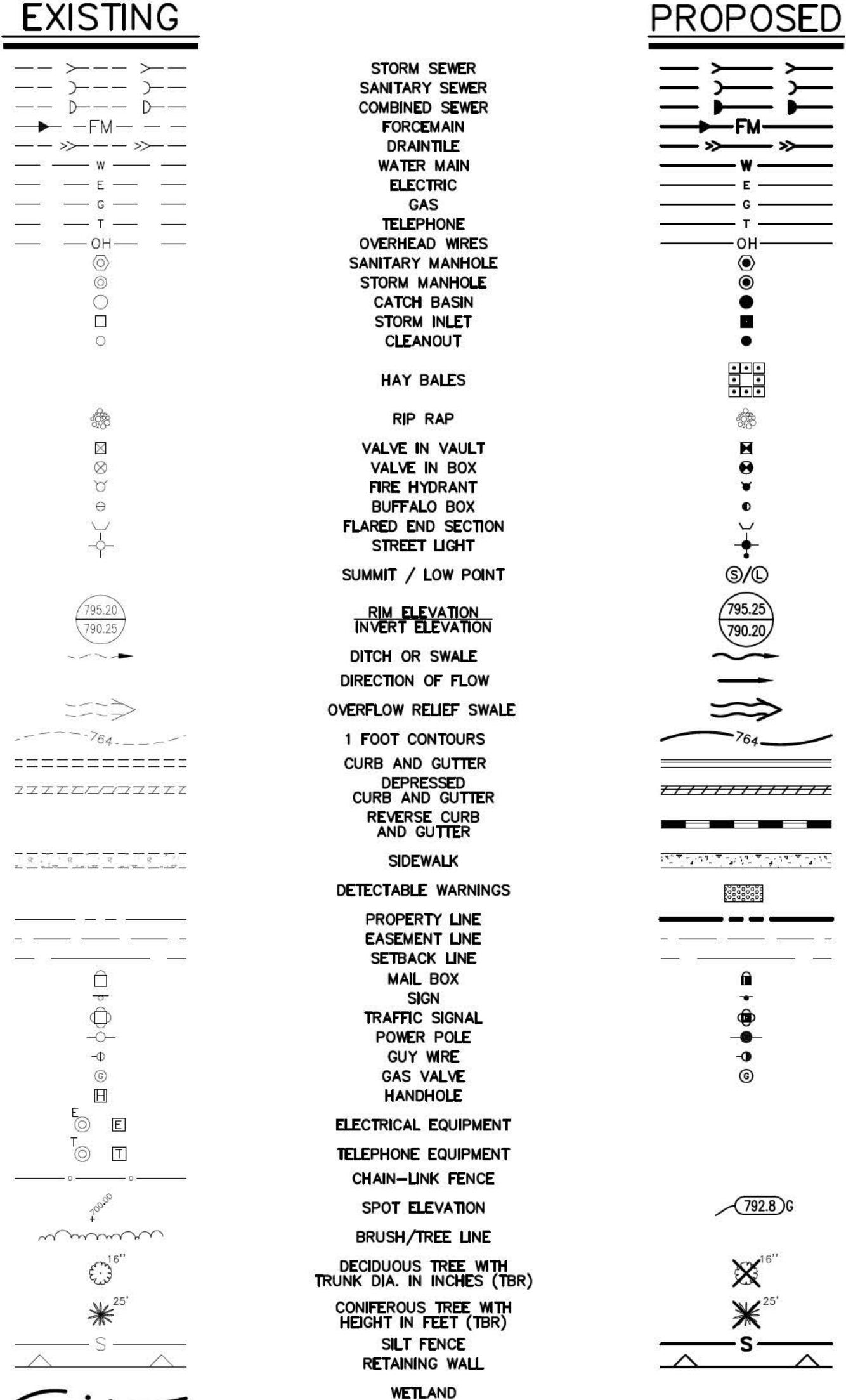
FOR BIDDING

NOT FOR CONSTRUCTION

Proposed Improvements for PROPOSED RETAIL DEVELOPMENT

1317 EAST SIBLEY BOULEVARD
VILLAGE OF DOLTON, ILLINOIS

STANDARD SYMBOLS



N.T.S.

DEPARTMENT PROPERTY GROUP, LLC
200 W. MADISON ST, SUITE 4200
CHICAGO, ILLINOIS 60606
(312) 332-4172

ABBREVIATIONS

ADJ.	ADJUST
AGG.	AGGREGATE
ARCH.	ARCHITECT
B.A.M.	BITUMINOUS AGGREGATE MIXTURE
B-B	BACK TO BACK
B/C	BACK OF CURB
B/P	BOTTOM OF PIPE
B/W	BALD OF WALK
B-BOX	BUFFALO BOX
BIT.	BITUMINOUS
BM.	BENCHMARK
B.O.E.	BY OTHERS
C.E.	COMMERCIAL ENTRANCE
CB	CATCH BASIN
CE	CENTERLINE
CMP	CORRODED METAL PIPE
CNTRL	CONTROL
C.O.	CLEANOUT
CONC.	COPPER
D.	CUBIC YARD
DIA.	DITCH
DIP	DIAMETER
DW	DUCTILE IRON PIPE
DWW	DUCTILE IRON WATER MAIN
DWSP	DOWNSPOUT
DT	DRAIN TILE
E	ELECTRIC
E-E	EDGE TO EDGE
ELEV.	ELEVATION
EP	EXPANDED PAVEMENT
EX.	EXISTING
FE	FIELD ENTRANCE
F-F	FACE TO FACE
FF.	FINISHED FLOOR
FES	FLARED END SECTION
F/L	FLOW LINE
FM	PIPE MAIN
G	GROUND
G/F	GRADE AT FOUNDATION
GW	GUY WIRE
H.D.W.	HEADWALL
HM	HOLE
HYD.	HYDRANT
INL.	INLET
INV.	INVERT
IP	IRON PIPE
LT	LID
MAX.	MATRIX
MB	MAILBOX
M/E	MEET EXISTING
MH	MHOLE
MIN.	MINIMUM
N.H.L.	NORMAL WATER LEVEL
P.E.	PRIVATE ENTRANCE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
P/WALL	POINT OF WALL
PP	POWER POLE
PROP.	PROPOSED
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE PIPE
PVO	POINT OF VERTICAL CURVATURE
PM	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
P	PAVEMENT
P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
R	RADIUS
R.O.W.	RIGHT-OF-WAY
RCP	REINFORCED CONCRETE PIPE
REM	REMOVAL
REV	REVERSE
RR	RAILROAD
RT	RIGHT
SAN	SANITARY
SF	SQUARE FOOT
SHLD.	SHOULDER
SL	STREET LIGHT
SMH	SANITARY MANHOLE
ST	STATION
STA.	STATION
STD.	STANDARD
SW	SIDEWALK
SY	SQUARE YARDS
TBR	TO BE REMOVED
TEL	TELEPHONE
T-A	TYPE A
T/C	TOP OF CURB
T/F	TOP OF FOUNDATION
T/P	TOP OF PIPE
T/W	TOP OF WALK
T/WALL	TOP OF WALL
TEMP.	TEMPERATURE
TRANS	TRANSFORMER
V.B.	VALVE BOX
VCP	VITRIFIED CLAY PIPE
V.V.	VALVE VAULT
WL	WATER LEVEL
WM	WATER MAIN

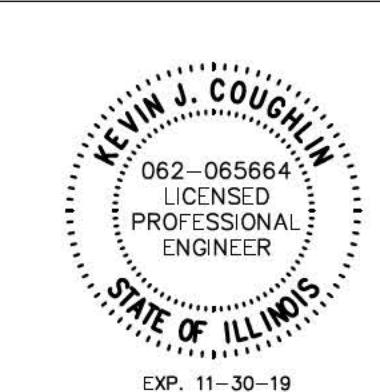
MANHARD CONSULTING, LTD. IS NOT RESPONSIBLE FOR THE SAFETY OF ANY PARTY AT OR ON THE CONSTRUCTION SITE. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ANY OTHER PERSON OR ENTITY PERFORMING WORK OR SERVICES. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR THE JOB SITE SAFETY OF PERSONS ENGAGED IN THE WORK OR THE MEANS OR METHODS OF CONSTRUCTION.

Manhard
CONSULTING LTD

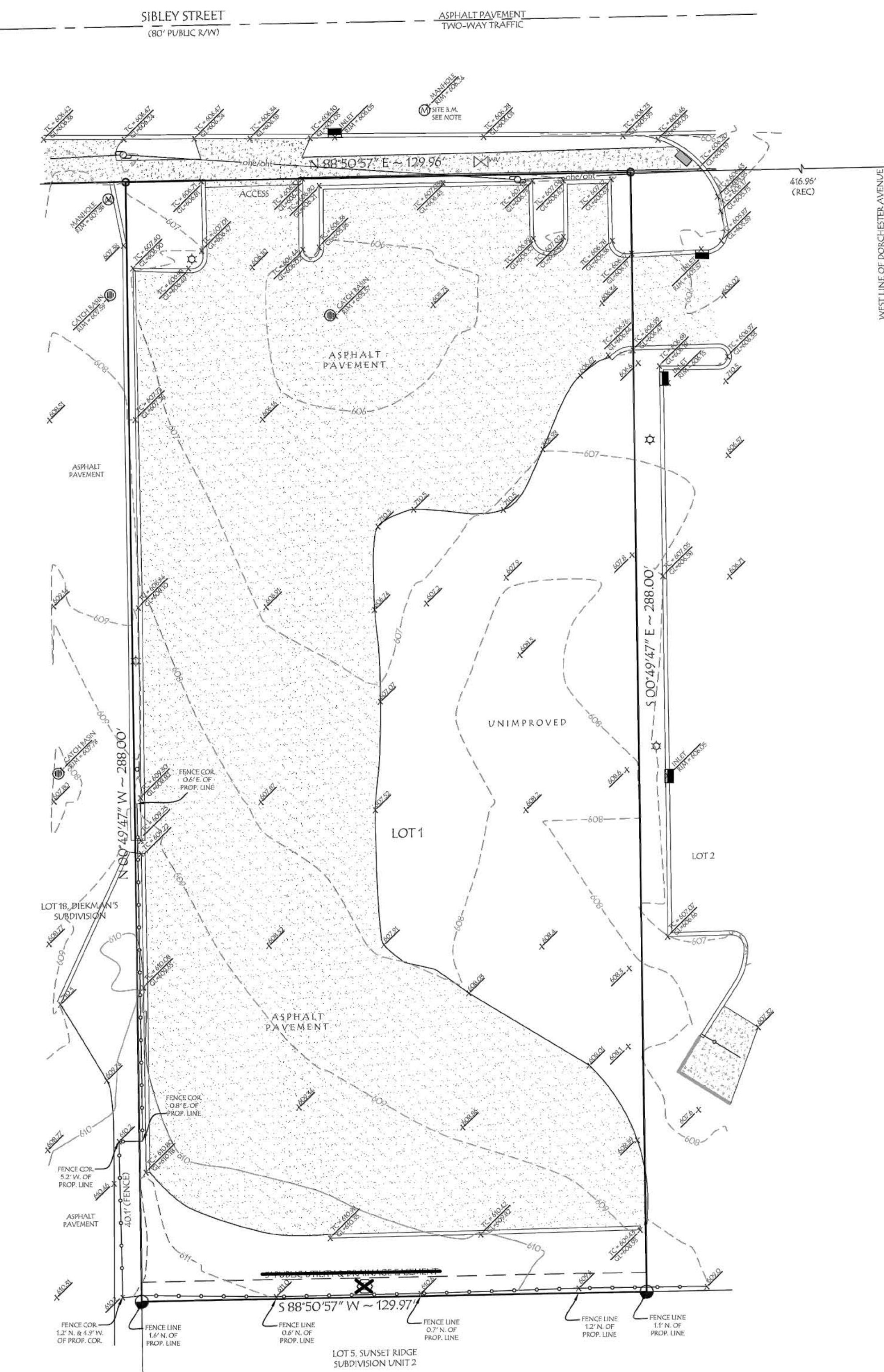
One Overlook Point, Suite 290, Lincolnshire, IL 60669 ph:847-634-5550 fx:847-634-0095 manhard.com
Civil Engineers • Surveyors • Water Resources Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners



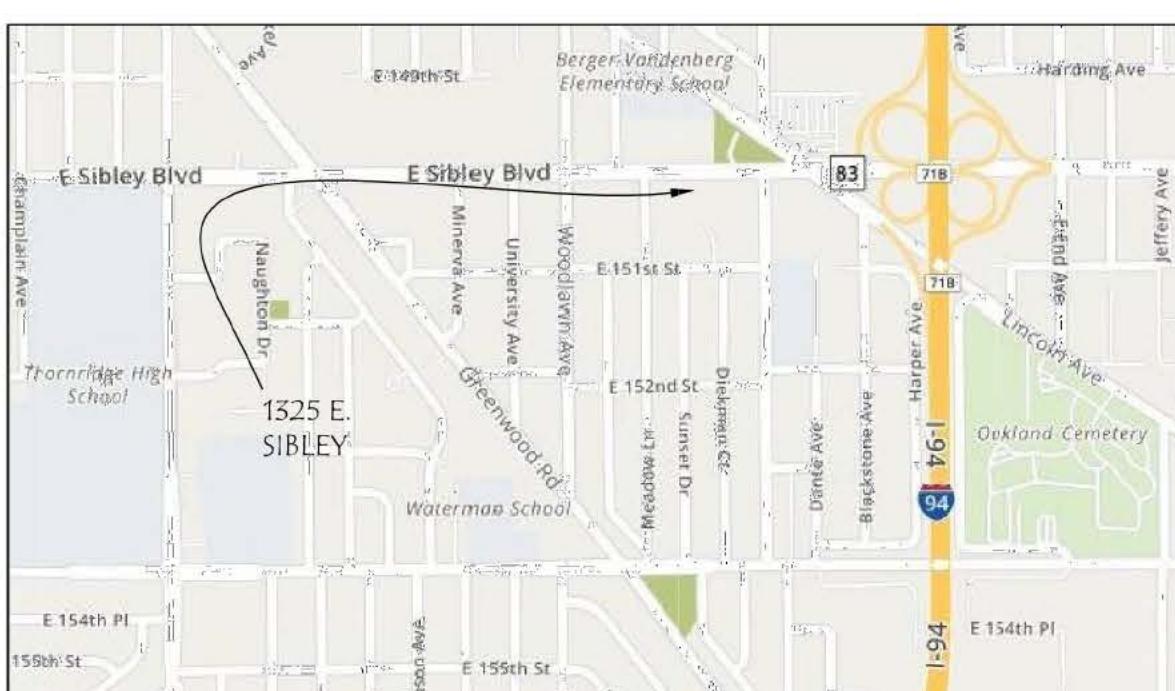
UTILITY CONTACTS	
ELECTRIC	WATER
COMED	VILLAGE OF DOLTON 401 E 144TH STREET CRESTWOOD, IL 60445 (800) 334-7661
	AT&T 236 E 159TH STREET HARVEY, IL 60426 (708) 222-2222
GAS	TELEPHONE NICOR 19199 GLENWOOD ROAD GLENWOOD, IL 60507 (888) 642-6748
	STORM SEWER VILLAGE OF DOLTON 401 E 144TH STREET DOLTON, IL 60419 (708) 201-3280 CONTACT: MATHEW STACEY
	SANITARY SEWER MWRD CALUMET WRP 100 E ERIN STREET CHICAGO, IL 60611 (773) 266-3538 CONTACT: MATHEW STACEY



Dwg Name: \mcl-wh-nras\projects-vh\Aetdol01\dwa\Eng\Final Drawings\Plan Set\02-ALTA.dwg Updated By: JCamporese



Graphic Scale



VICINITY MAP
no scale

	= Set Iron Rod		= Area Light
	= Found Iron Rod		= Bollard
	= Set Survey Nail		= Utility Pole
	= Water Valve		= Sign
	= Catch Basin		= Spot Grade
	= Manhole		= Top of Curb Elevation
	= Curb Inlet		= Gutter Line Elevation
	= Curb		
	= ADA Textured Pad		= Concrete Walks & Pads
	= Schedule "B" Item		Chain Link Fence

PROPERTY DESCRIPTION:

LOT 1 IN FINAL PLAT OF RESUBDIVISION OF LOT 2 IN DIEKMAN'S SUBDIVISION BEING A RESUBVISION OF PART OF LOT 2 IN DIEKMAN'S SUBDIVISION, LOCATED IN THE SOUTHEAST 1/4 OF SECTION 11, TOWNSHIP 36 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT OF RESUBDIVISION RECORDED JUNE 2, 2016 AS DOCUMENT 1615429064, IN THE VILLAGE OF DOLTON, COOK COUNTY, ILLINOIS.

ITEMS CORRESPONDING TO SCHEDULE "B:"

CHICAGO TITLE INSURANCE COMPANY
COMMITMENT No. 19GSC006242LP
EFFECTIVE DATE: MARCH 18, 2019

- N 16. Subject to matters of record as shown on plat of resubdivision recorded June 2, 2016 as document 1615429064. (For further particulars, see record.)
PLATTED BOUNDARY AND OTHER PARTICULARS SHOWN BUT NOT OTHERWISE LABELED - SEE DRAWING

C 17. Rights of the public, the State of Illinois and the municipality in and to that part of the Land, if any, taken or used for road purposes.
ROADWAY SHOWN BUT NOT OTHERWISE LABELED - SEE DRAWING

O 18. Rights of Way for drainage tiles, ditches, feeders, laterals and underground pipes, if any.
SURFACE DRAINAGE STRUCTURES SHOWN BUT NOT OTHERWISE LABELED - SEE DRAWING

E 19. Easement for public utilities and drainage over the South 5 feet of the Land as depicted on the Survey by L.R. Page & Associates, LLC, no. 97084205, dated August 26, 1997
AFFECTS PARCEL AND IS SHOWN - SEE DRAWING

NO RECORD OF EXISTING EASEMENT FOUND

ZONING NOTE:

PROPERTY CURRENTLY ZONED "BUSINESS DISTRICT LIMITED RETAIL"

FOR BULK RESTRICTIONS REFER TO:
BUILDING DEPARTMENT
VILLAGE OF DOLTON
14122 CHICAGO ROAD, DOLTON, IL 60419
PHONE: 708-849-4000
<https://vodolton.org/departments/building-department/>

FLOOR NOTE

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 17031C, COMMUNITY PANEL 0752J EFFECTIVE DATE AUGUST 19, 2008, THE PARCEL SHOWN HEREON APPEARS TO BE LOCATED IN ZONE "X.". ZONE "X" IS DEFINED AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN." THIS DETERMINATION WAS MADE BY GRAPHICAL PLOTTING AND SCALED MAP MEASURE ONLY. NO FIELD MEASUREMENTS WERE TAKEN CONCERNING THIS DETERMINATION, AND BASE FLOOD ELEVATIONS WERE NOT ESTABLISHED IN PERFORMANCE OF THIS SURVEY.

BENCHMARK AND DATUM NOTES

- 1) ELEVATIONS ARE ADJUSTED TO STATE PLANE COORDINATE DATUM.
2) SITE BENCHMARK IS RIM OF MANHOLE IN SIRLEY STREET AT APPROXIMATE MIDPOINT OF LOT 2. ELEVATION = 606.24

ENCROACHMENT NOTE:

SUBJECT PROPERTY FENCE APPEARS TO ENCROACH OVER AND UPON WEST ADJOINER'S PROPERTY BY THE AMOUNT SHOWN ON THE DRAWING.

MISCELLANEOUS NOTES:

- 1) PARCEL P.I.N.: 29-11-400-049-0000
 - 2) PARCEL AREAS: 37,429.33 sq. ft./0.859 ac±
 - 3) NO STRIPED PARKING STALLS WERE OBSERVED ON THE DAY THE FIELD WORK WAS PERFORMED
 - 4) BEARINGS SHOWN HEREON ARE BASED UPON THOSE RECITED IN THE RECORDED PLAT
 - 5) UTILITIES AND OTHER IMPROVEMENTS SHOWN HEREON ARE BASED ON DIRECT OBSERVATION OF ABOVE-GROUND APPURTENANCES ONLY. THE SURVEYOR HAS NOT BEEN PROVIDED WITH UTILITY PLANS OR ATLASES RELATED TO THE SUBJECT PROPERTY OR ADJOINING PROPERTIES OR RIGHTS-OF-WAY.
 - 6) SUBJECT PARCEL IS 416.96 FEET WEST OF THE SOUTHWESTERLY INTERSECTION OF SIBLEY BOULEVARD AND DORCHESTER AVENUE, BOTH PUBLIC RIGHTS-OF-WAY. PARCEL HAS DIRECT VEHICULAR ACCESS TO SIBLEY BOULEVARD AS SHOWN AND LABELED ON THE DRAWING.
 - 7) THE PROPERTY DESCRIPTION SHOWN HEREON IS THE SAME AS, AND DESCRIBES THE SAME PARCEL, AS THAT REFERRED TO IN CHICAGO TITLE INSURANCE COMPANY COMMITMENT No. 19GSC0062421 P BEARING AN EFFECTIVE DATE OF MARCH 18, 2019.

SURVEYOR'S CERTIFICATION

To:
AETNA DEVELOPMENT CORPORATION, AN ILLINOIS CORPORATION
CHICAGO TITLE INSURANCE COMPANY

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 5, 7(a), 7(b)(1), 8, 9 and 14 of Table A thereof. The field work was completed on April 9, 2019.

R W D
RUSSELL WAID DILLON
Professional Land Surveyor No. 3153
LICENSE EXPIRATION DATE: November 30, 2020

No dimensions should be assumed by scale measurements upon plat. Contractor should verify and compare all points before beginning any construction and at once report any discrepancies to the surveyor. Surveyor should be contacted for construction layout of any improvements.

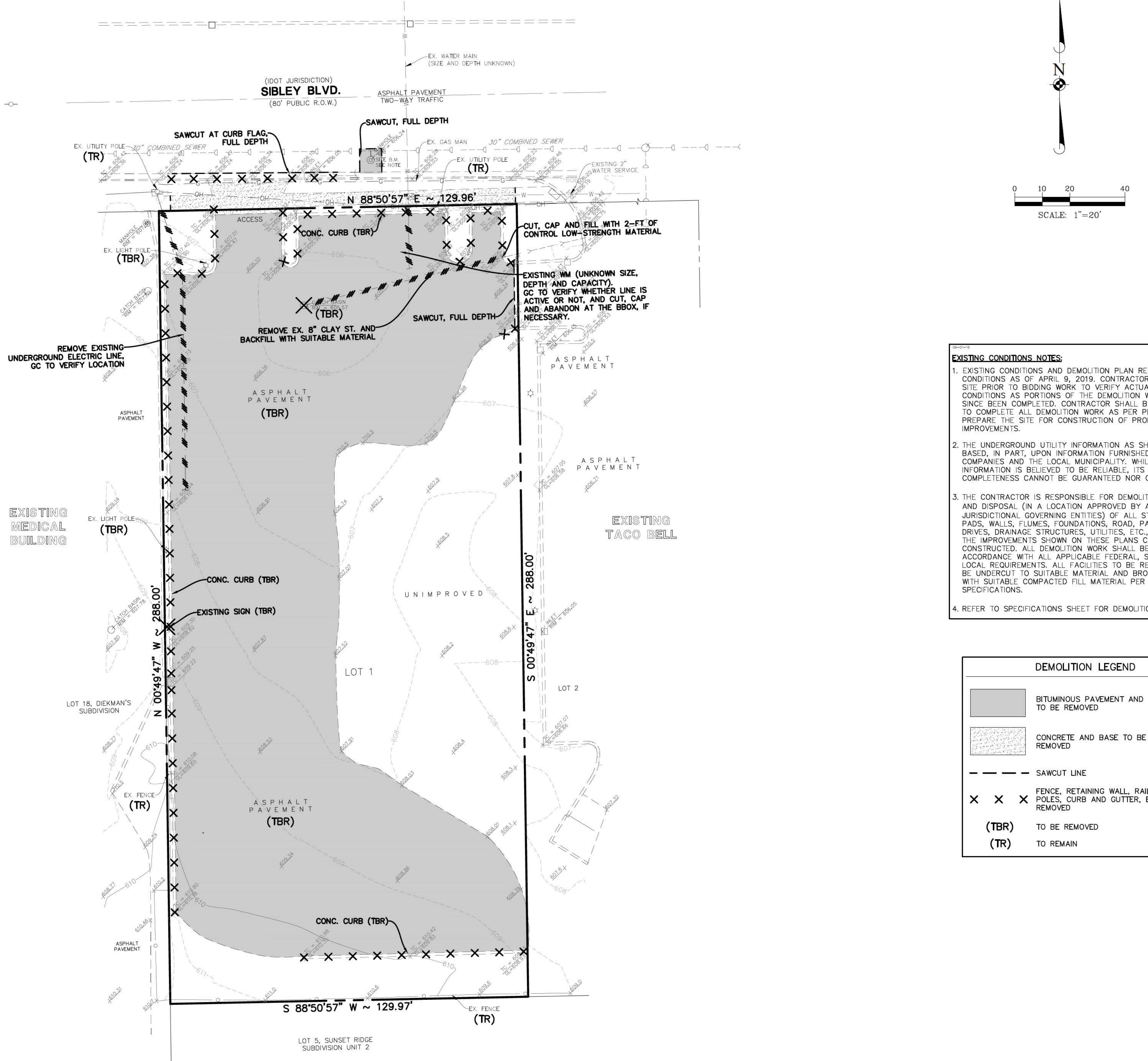
For building restrictions and/or easements refer to your deed, contract, title policy, and/or zoning regulations. This plat is valid only if it contains the original signature and seal of the surveyor. If you have any questions regarding this plat do not hesitate to contact us.

[View Details](#) | [Edit](#) | [Delete](#)

ZARKO SEKEREZ & ASSOCIATES, INC.		DRAWN BY: PS	CHECKED BY: RWD
Land Surveyors & Land Planners		DATE: April 25, 2019	ORDER NO.: 11060
ALTAA/NSPS LAND TITLE SURVEY 1323 East Sibley Boulevard Dolton, Illinois		116 WEST CLARK STREET CROWN POINT, INDIANA 46307 IND. PHONE: (219) 663-3344 IND. FAX: (219) 663-7282 ILL. PHONE: (312) 726-1513 ILL. FAX: (312) 256-9506	
SHEET 1 OF 1	Denzin Soltanzadeh, LLC 190 S. LaSalle Street Suite 2160 Chicago, Illinois		

PROJ. MGR.: TTR
PROJ. ASSOC.: JRC
DRAWN BY: PS
DATE: 08-05-19
SCALE: N.T.S.

2 OF 13
AETDOILO1



PROPOSED RETAIL DEVELOPMENT

VILLAGE OF DOLTON, ILLINOIS

EXISTING CONDITIONS AND DEMOLITION PLAN

THE JOURNAL OF CLIMATE

Manharg Consulting Ltd

One Overlook Point, Suite 280, Lincolnshire, IL 60069
**Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners**
ph:847-634-5550 fx:847-634-0095 manhard.com

הוּא מִתְבָּרֵךְ וְמִסְמֶרֶת - הוּא תְּבוּנוֹתָיו
הוּא מִתְבָּרֵךְ וְמִסְמֶרֶת - בְּמוֹתָה
הוּא מִתְבָּרֵךְ וְמִסְמֶרֶת - בְּמוֹתָה

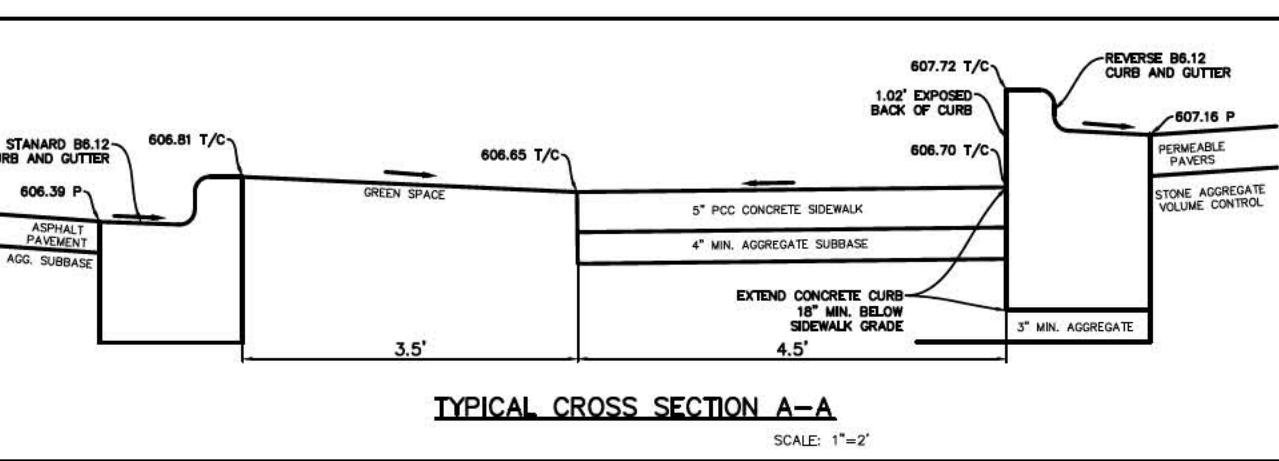
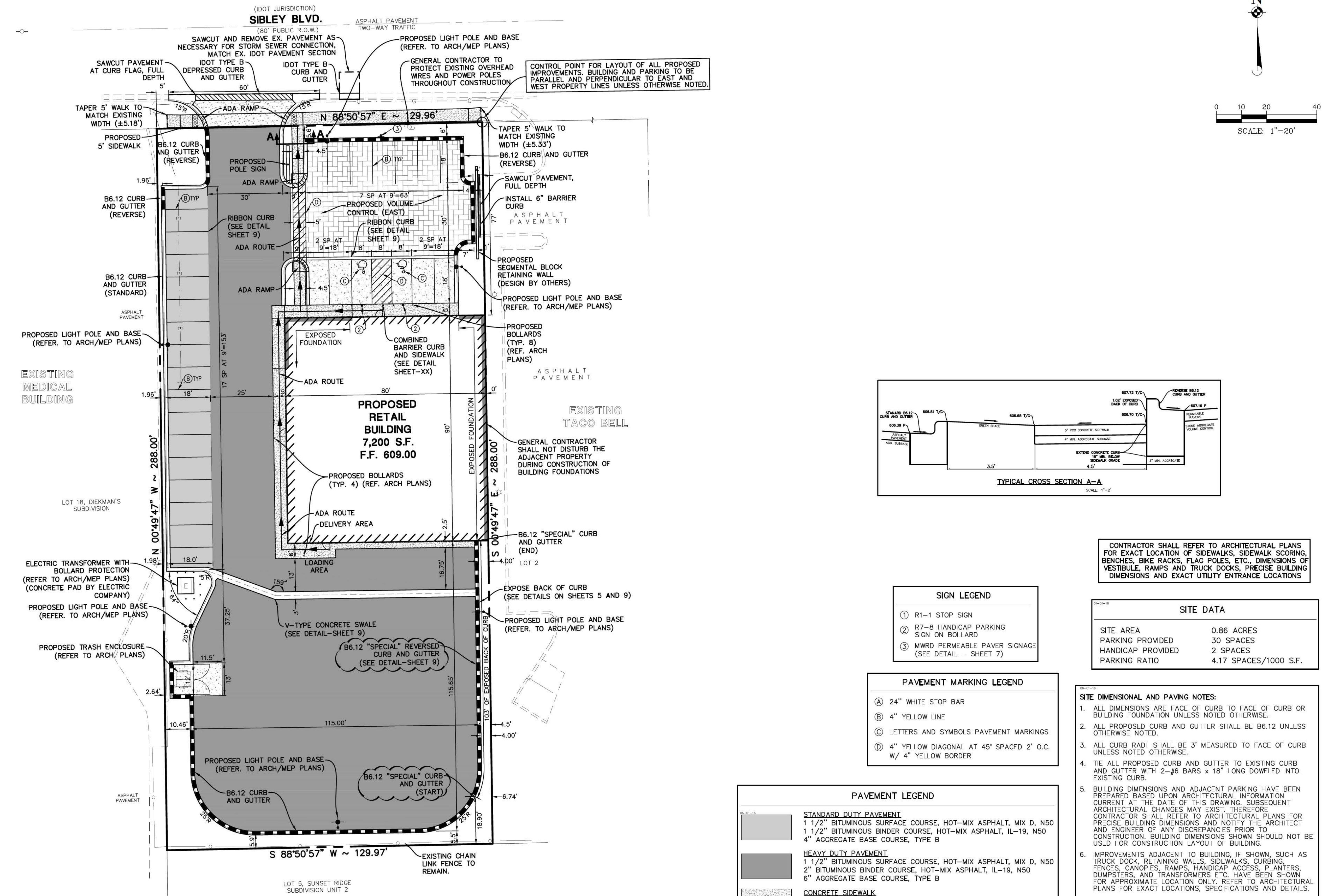
10-30-19 REVISED PER INTERNAL REVIEW
10-15-19 REVISED PER VILLAGE REVIEW

THE JOURNAL OF CLIMATE

PROJ. DRAWN DATE: SCALE

MGR.:	<u>TTR</u>	
ASSOC.:	<u>JRC</u>	
N BY:	<u>MH</u>	
	<u>08-05-19</u>	
	<u>1" = 20'</u>	
SHEET		
3	OF	13
AETDOIL01		

DRAWN BY	JRC
REVISIONS	
DATE	11-14-19 REvised PER INTERNAL REVIEW 11-14-19 REvised PER VILLAGE REVIEW 11-14-19 REvised PER INTERNAL REVIEW 11-14-19 REvised PER VILLAGE REVIEW 11-15-19 REvised PER VILLAGE REVIEW
MANHARD CONSULTING LTD.	One Division Point, Suite 280, Uncorked, Inc., 6009 Pharr Rd., San Antonio, Texas 78230 • Water & Resource Engineers • Water & Wastewater Engineers • Landscaping Architects • Planners • Construction Managers



CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF SIDEWALKS, SIDEWALK SCORING, BENCHES, BIKE RACKS, FLAG POLES, ETC., DIMENSIONS OF VESTIBULE, RAMPS AND TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS

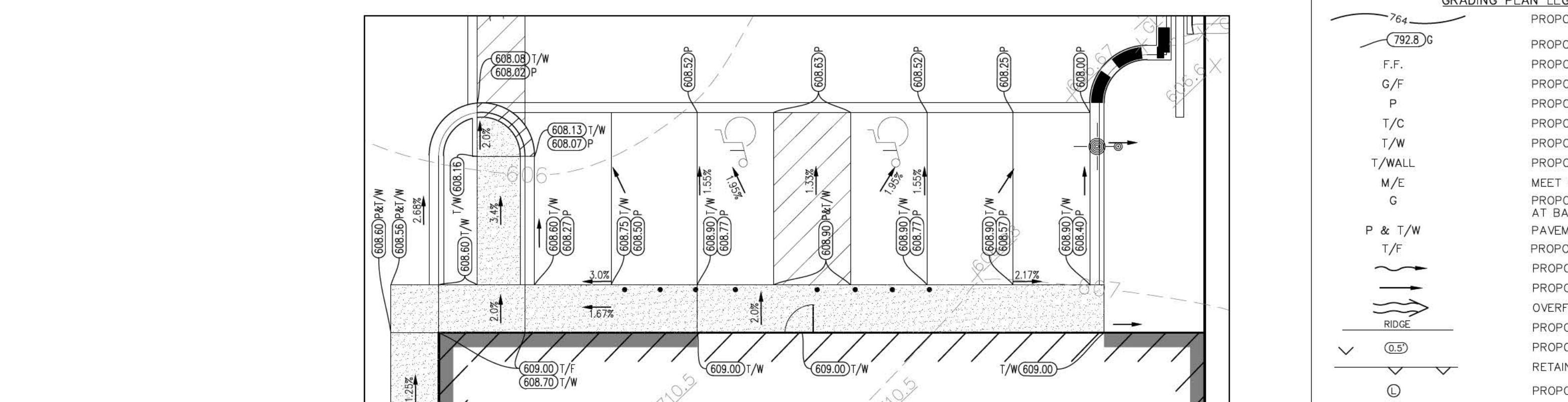
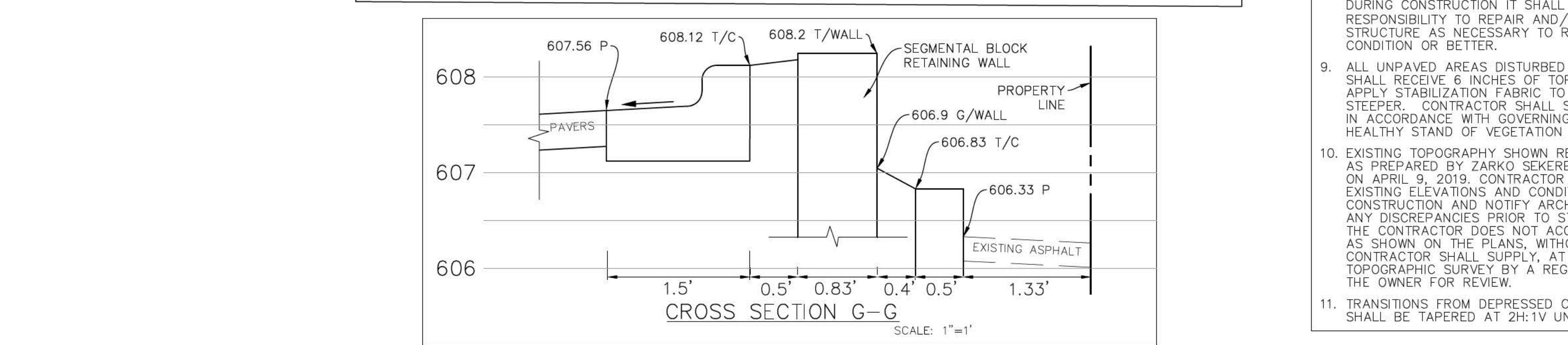
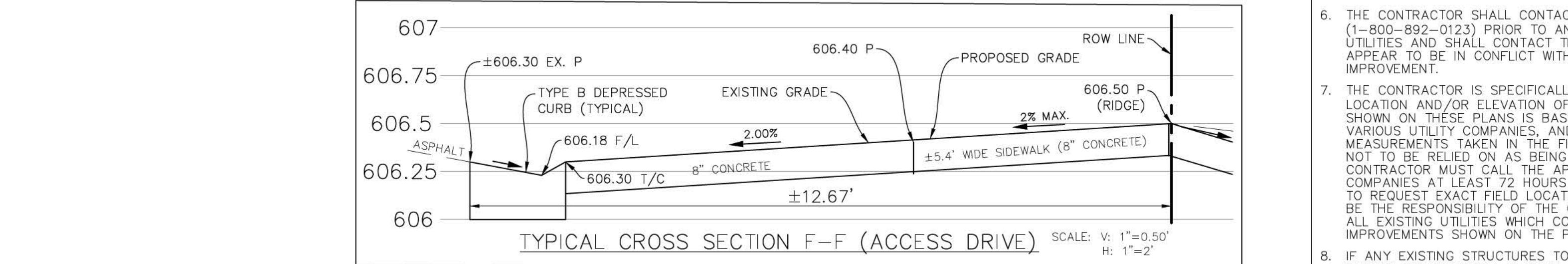
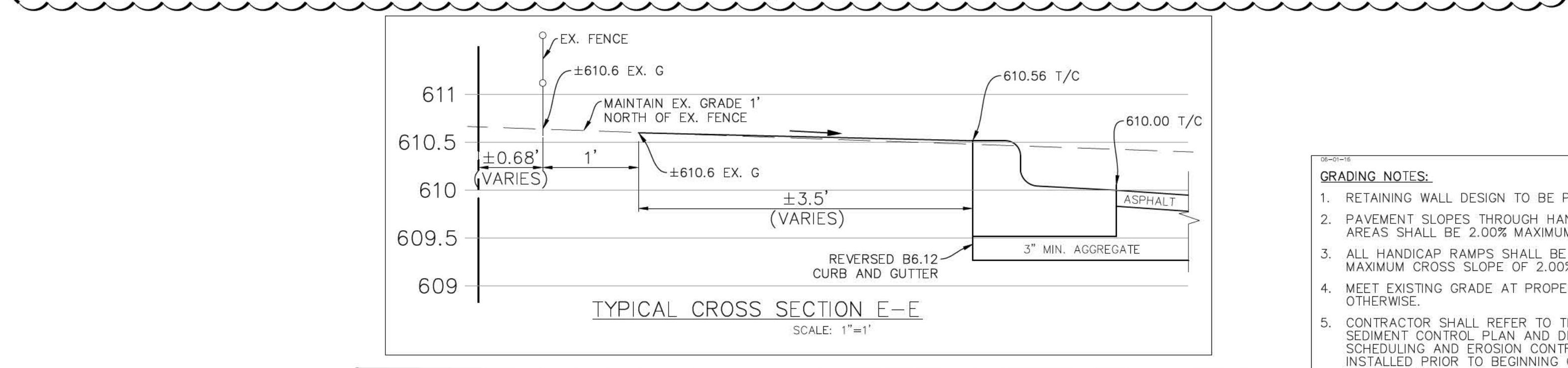
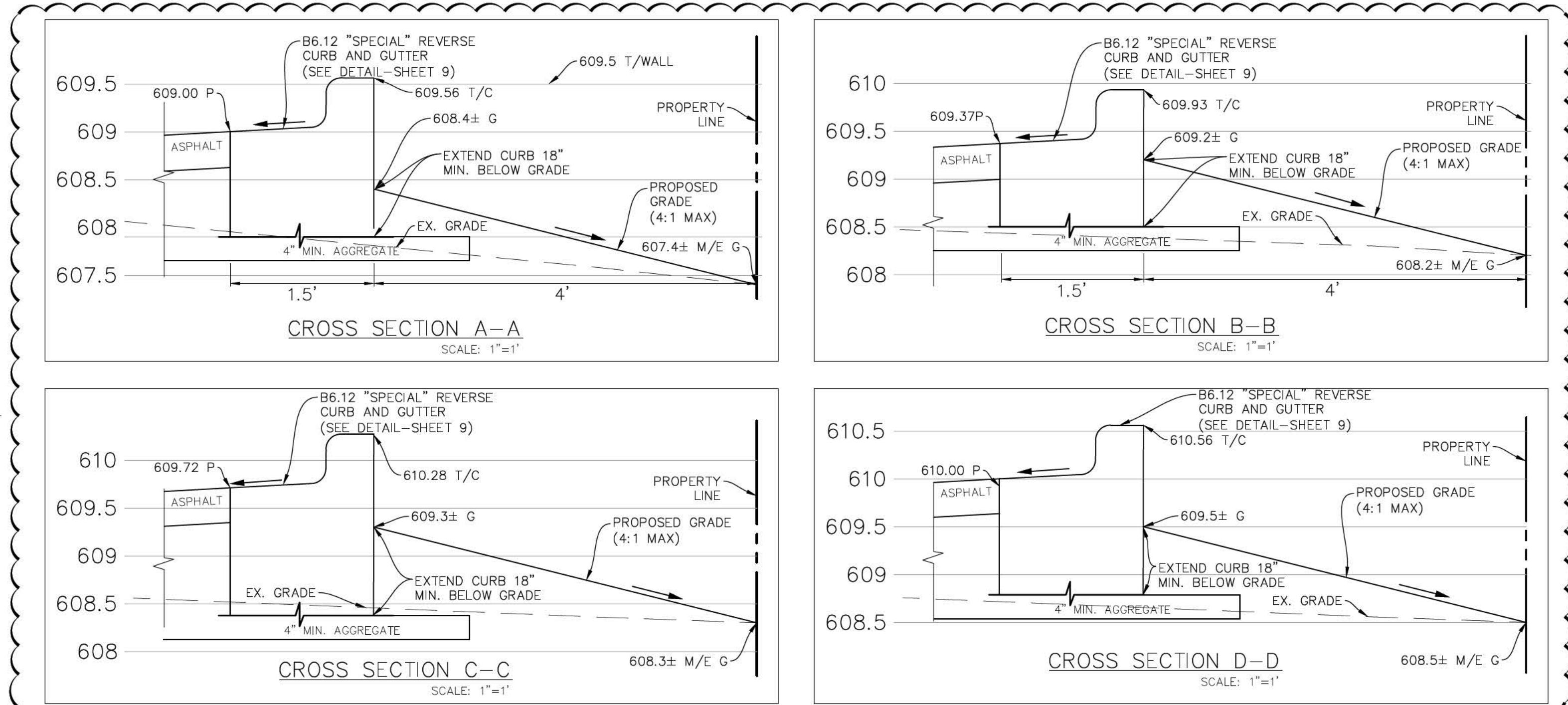
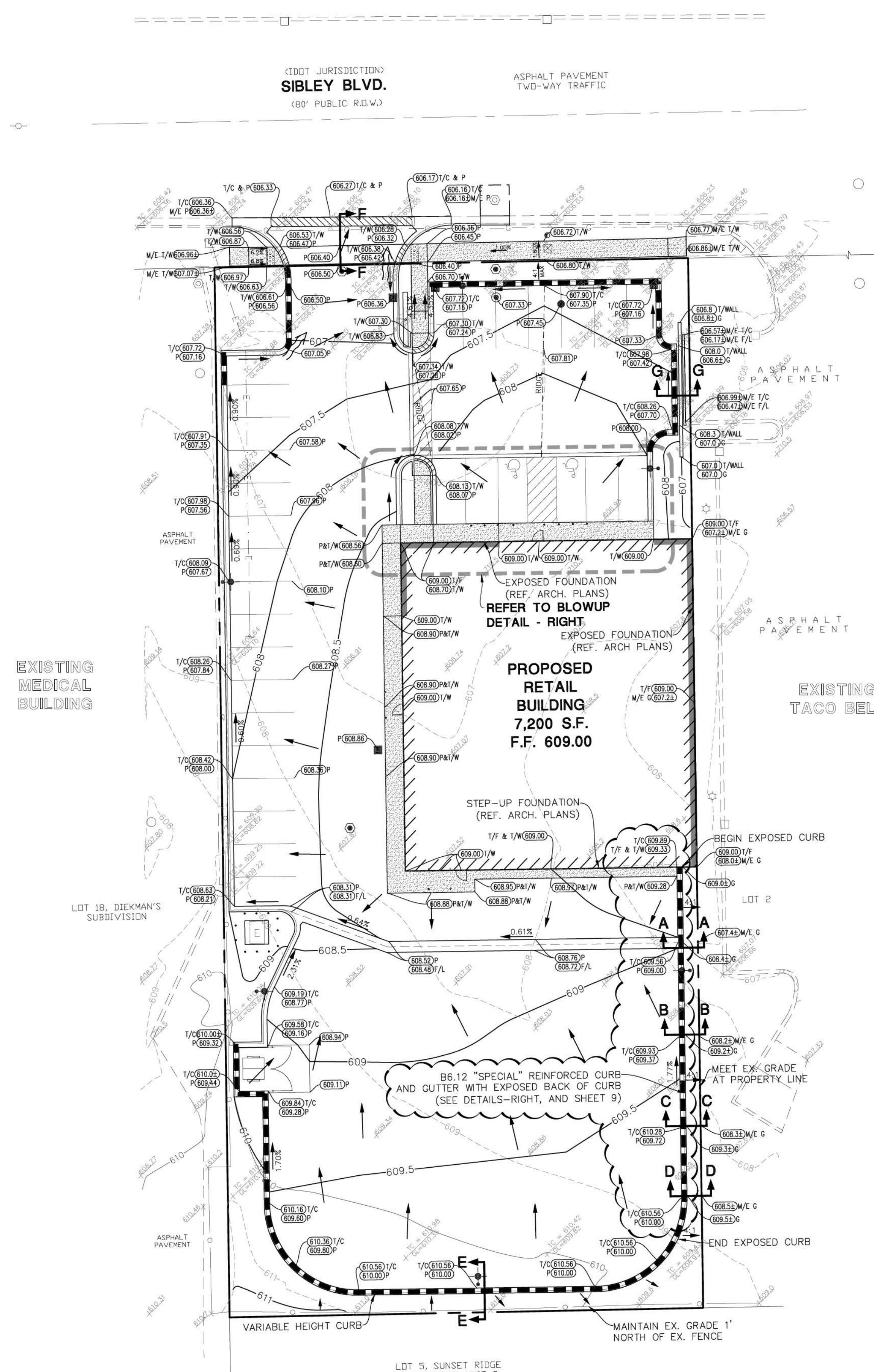
SIGN LEGEND	
①	R1-1 STOP SIGN
②	R7-8 HANDICAP PARKING SIGN ON BOLLARD
③	MWRD PERMEABLE PAVER SIGNAGE (SEE DETAIL - SHEET 7)

SITE DATA	
SITE AREA	0.86 ACRES
PARKING PROVIDED	30 SPACES
HANDICAP PROVIDED	2 SPACES
PARKING RATIO	4.17 SPACES/1000 S.F.

PAVEMENT MARKING LEGEND	
Ⓐ	24" WHITE STOP BAR
Ⓑ	4" YELLOW LINE
Ⓒ	LETTERS AND SYMBOLS PAVEMENT MARKINGS
Ⓓ	4" YELLOW DIAGONAL AT 45° SPACED 2' O.C. W/ 4" YELLOW BORDER

PAVEMENT LEGEND	
STANDARD DUTY PAVEMENT	
1 1/2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50	
2" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50	
4" AGGREGATE BASE COURSE, TYPE B	
HEAVY DUTY PAVEMENT	
1 1/2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50	
2" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50	
6" AGGREGATE BASE COURSE, TYPE B	
CONCRETE SIDEWALK	
4" PORTLAND CEMENT CONCRETE	
4" AGGREGATE BASE COURSE, TYPE B	
CONCRETE PAVEMENT (DOT ROW)	
8" PORTLAND CEMENT CONCRETE PAVEMENT W/ 6 X 6 W1.4 WWF	
4" COMPACTED AGGREGATE BASE, TYPE B	
CONCRETE PAVEMENT (ON-SITE)	
6" PORTLAND CEMENT CONCRETE PAVEMENT W/ 6 X 6 W1.4 WWF	
4" COMPACTED AGGREGATE BASE, TYPE B	
UNILOCK PERMEABLE PAVERS - ECO-PRIORA™	
3-1/8" CONCRETE PAVERS	
2" BEDDING COURSE (CA-16)	
4" BASE AGGREGATE (CA-7)	
OPEN GRADED SUB-BASE, (CA-1)	
NON-WOVEN GEOTEXTILE FABRIC ON BOTTOM AND SIDES OF OPEN GRADED SUB-BASE	

- SITE DIMENSIONAL AND PAVING NOTES:**
- ALL DIMENSIONS ARE FACE OF CURB TO FACE OF CURB OR BUILDING FOUNDATION UNLESS NOTED OTHERWISE.
 - ALL PROPOSED CURB AND GUTTER SHALL BE B6.12 UNLESS OTHERWISE NOTED.
 - ALL CURB RADII SHALL BE 3' MEASURED TO FACE OF CURB UNLESS NOTED OTHERWISE.
 - TIE ALL PROPOSED CURB AND GUTTER TO EXISTING CURB AND GUTTER WITH 2"-#6 BARS X 18" LONG DOWELLED INTO EXISTING CURB.
 - BUILDING DIMENSIONS AND ADJACENT PARKING HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AS OF THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. BUILDING DIMENSIONS SHOWN SHOULD NOT BE USED FOR CONSTRUCTING LAYOUT OF BUILDING.
 - IMPROVEMENTS ADJACENT TO BUILDING SHOWN, SUCH AS TRUCK DOORS, RETAINING WALLS, SIDEWALKS, CURBINGS, FENCES, CANOPIES, RAMPS, HANDICAP ACCESS, PLANTERS, DUMPSTERS, AND TRANSFORMERS ETC. HAVE BEEN SHOWN FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS, SPECIFICATIONS AND DETAILS.
 - LOCATION OF PRIVATE SIDEWALKS SHALL BE COORDINATED WITH PROPOSED DOORWAY. CONTRACTOR TO VERIFY ACTUAL BUILDING PLAN LOCATIONS WITH ARCHITECT/DEVELOPER PRIOR TO CONSTRUCTING THE SIDEWALKS.
 - ALL ROADWAY AND PARKING LOT SIGNAGE, STRIPING, ETC. SHALL BE IN ACCORDANCE WITH LATEST JURISDICTIONAL GOVERNMENTAL ENTITY DETAILS.
 - SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
 - PROVIDE DEPRESSED CURB AND RAMP AT ALL HANDICAP ACCESSIBLE SIDEWALK AND PATH LOCATIONS PER FEDERAL AND STATE STANDARDS.
 - THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.



ADA GRADING DETAIL (SCALE: 1"=10')

RETAINING WALL DESIGN TO BE PROVIDED BY OTHERS.

PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.

ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.

MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.

CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SCHEDULING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.

THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

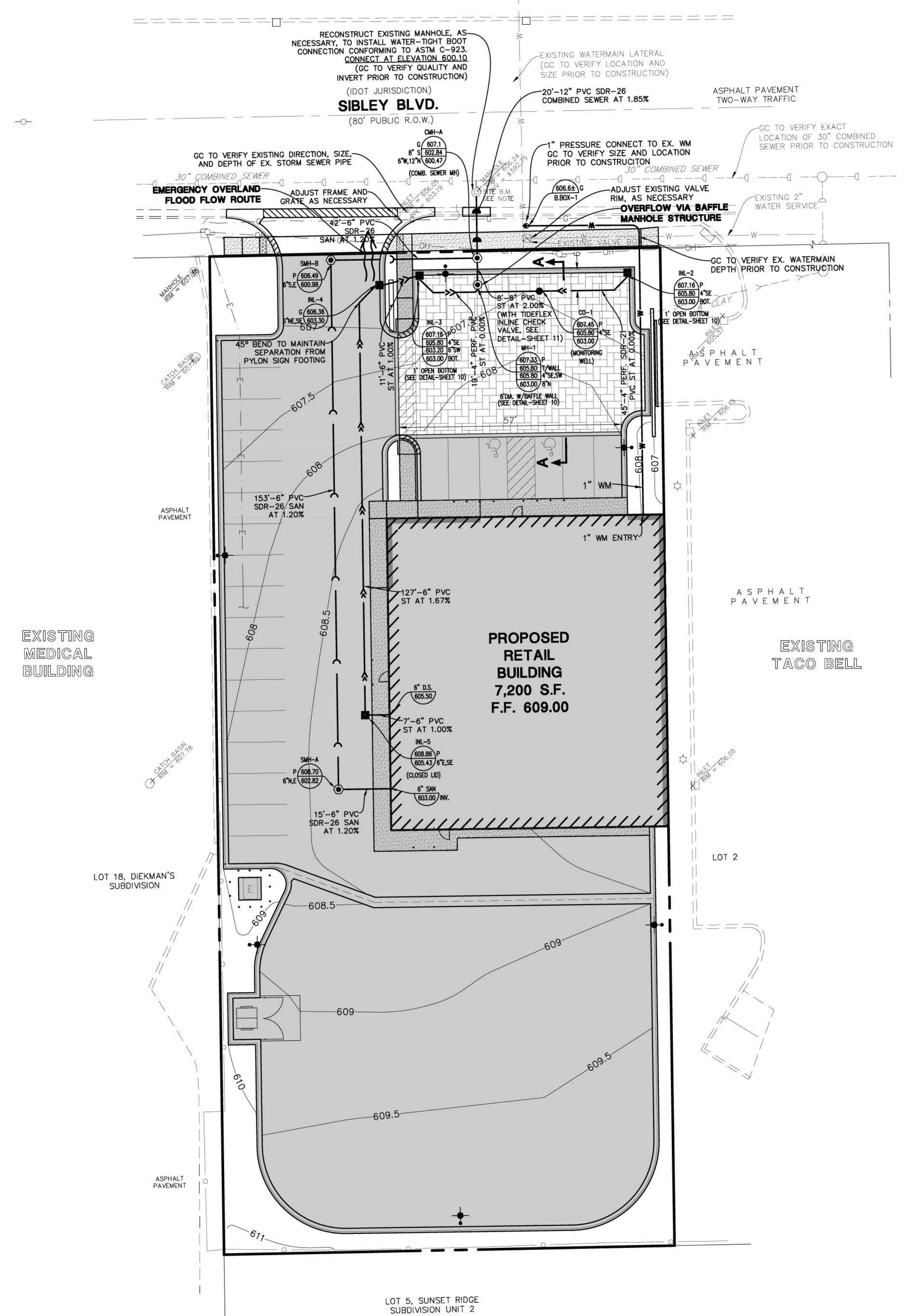
IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.

ALL UNPAVED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 6 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.

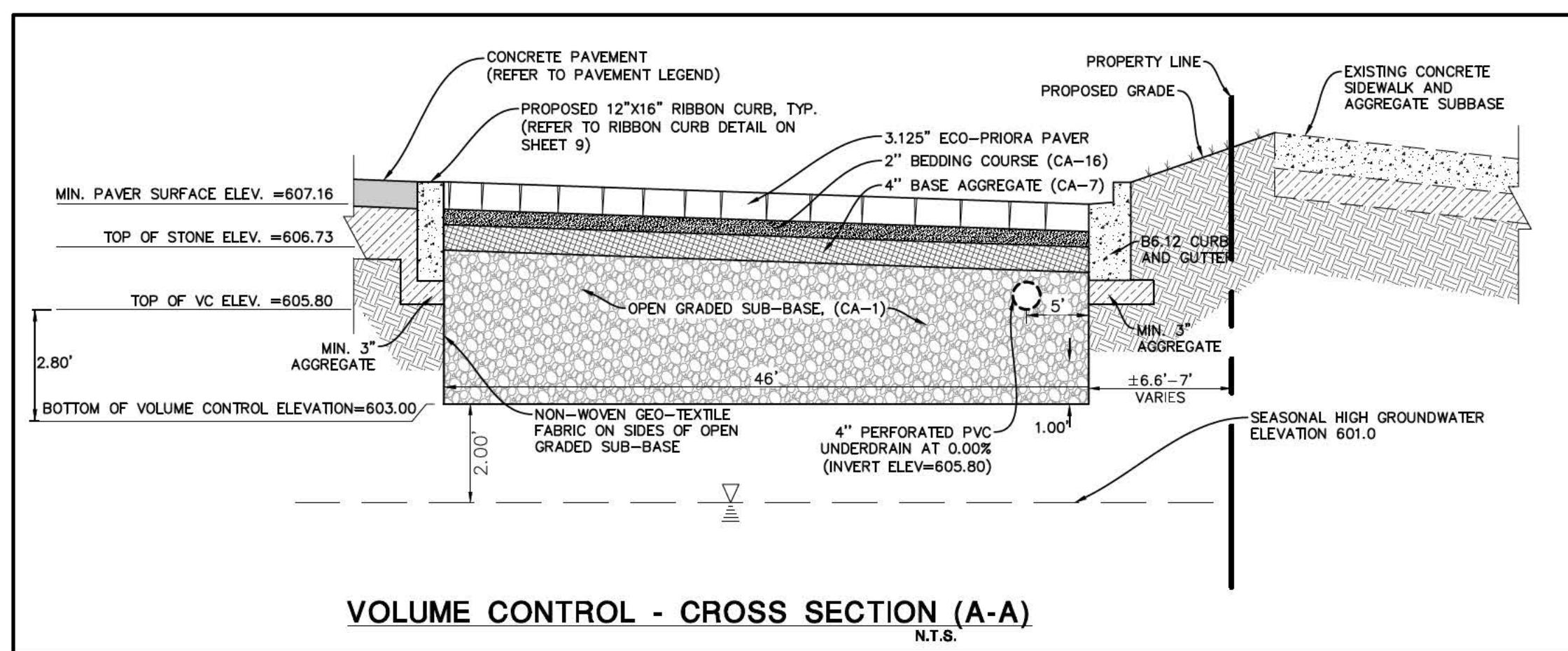
EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITIONS AS PREPARED BY ZARKO SEKEREZ AND ASSOCIATES, INC. ON APRIL 9, 2019. CONTRACTOR SHALL FIELD CHECK EXISTING ELEVATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.

TRANSITIONS FROM DEPRESSED CURB TO FULL HEIGHT CURB SHALL BE TAPERED AT 2H:1V UNLESS OTHERWISE NOTED.

<u>GRADING PLAN LEGEND</u>	
764	PROPOSED 1 FOOT CONTOURS
792.8 G	PROPOSED SPOT ELEVATION
F.F.	PROPOSED FINISHED FLOOR ELEVATION
G/F	PROPOSED GRADE AT FOUNDATION
P	PROPOSED PAVEMENT ELEVATION
T/C	PROPOSED TOP OF CURB
T/W	PROPOSED TOP OF WALK
T/WALL	PROPOSED TOP OF WALL
M/E	MEET EXISTING
G	PROPOSED GROUND GRADE OR GROUND AT BASE OF RETAINING WALL
P & T/W	PAVEMENT FLUSH WITH SIDEWALK GRADE
T/F	PROPOSED TOP OF FOUNDATION
→	PROPOSED DITCH OR SWALE
→	PROPOSED DIRECTION OF FLOW
RIDGE	OVERFLOW RELIEF SWALE
0.5'	PROPOSED RIDGE LINE
RETAINING WALL	PROPOSED DEPTH OF PONDING
▽ ▽	RETAINING WALL
(L)	PROPOSED SWALE LOW POINT
(S)	PROPOSED SWALE SUMMIT



MWRD Permeable Paver Volume Control Calculations					10/30/2019		
Site Impervious Area:	33235	sq. ft	Paver Area (sq. feet)	Depth (ft)	Media Volume (cubic ft.)	Porosity	Storage Volume (cubic feet)
Site Impervious Area (Less Paver Area)	30174	cf	Proposed Volume Control	3061	2.80	8570.8	0.36 3085.488
Vol Control Req: (Excluding Paver Area)	2504.44	cf					
Vol Control Req:	0.057	ac-ft					Volume Control Storage (cf): 3085.49
Paver Area (East V.C.):	3061	sq. ft					Volume Control Required (cf): 2504.44
Coarse Aggregate Depth	2.80	ft					
Coarse Aggregate Porosity	0.36						Meets volume control requirement? Yes
VC HWL = 605.80	Depth=2.80						
VC Bottom = 603.00							



PROPOSED RETAIL DEVELOPMENT

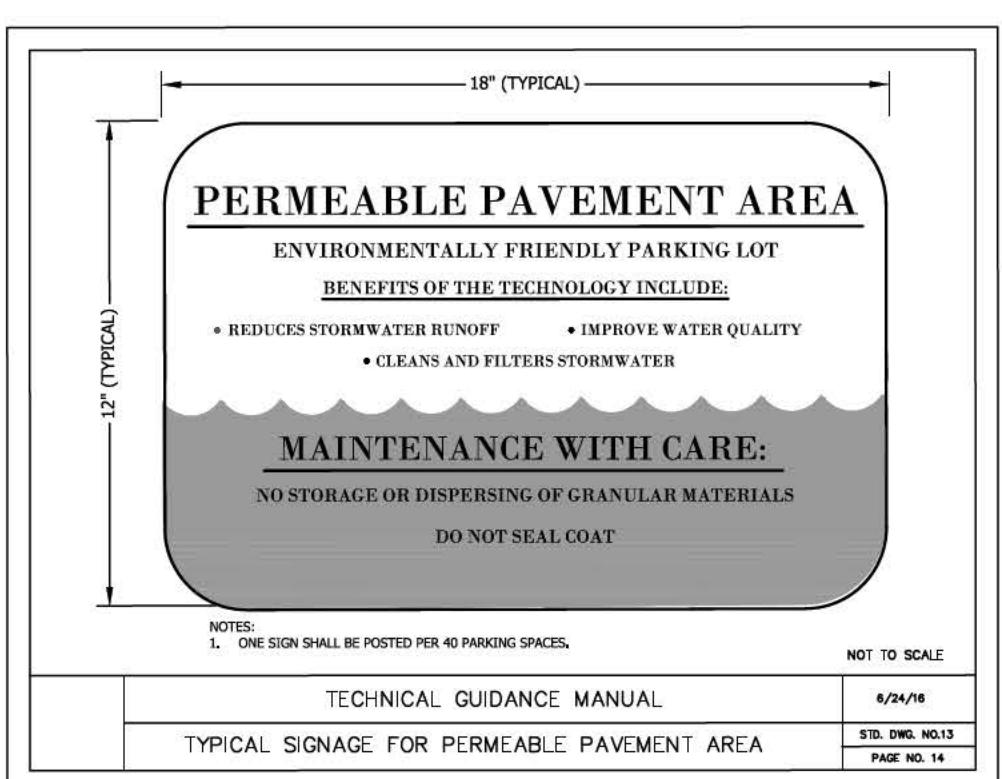
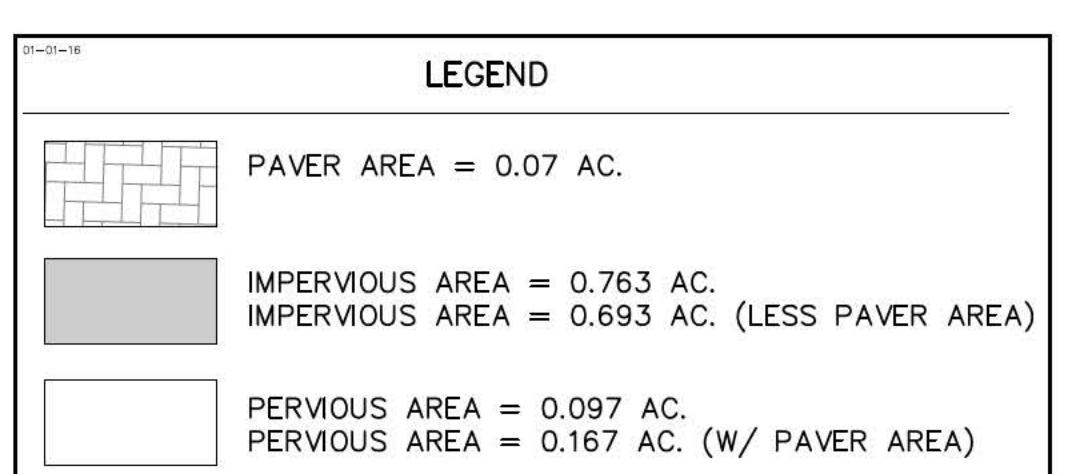
MWRD EXHIBIT

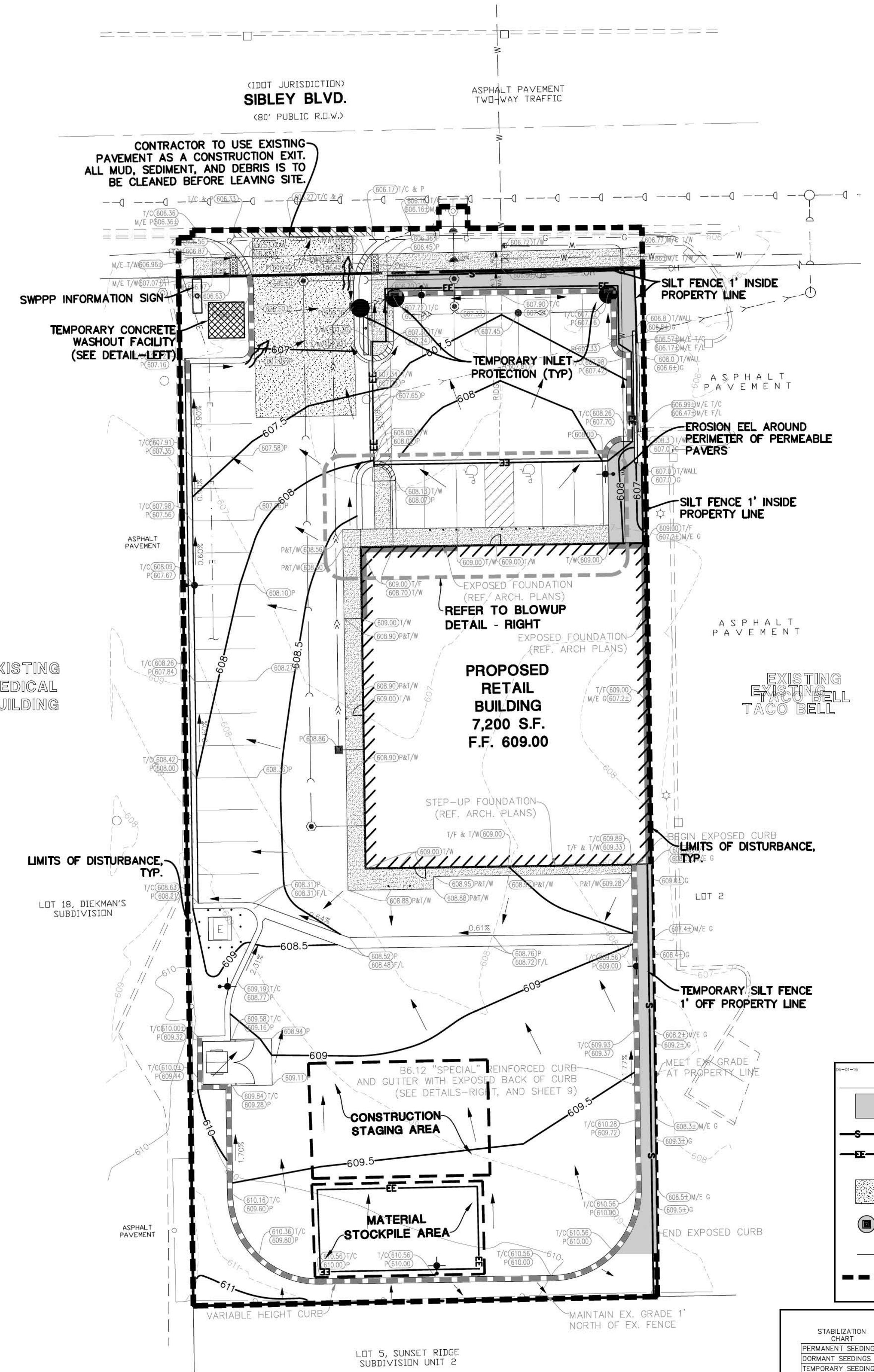
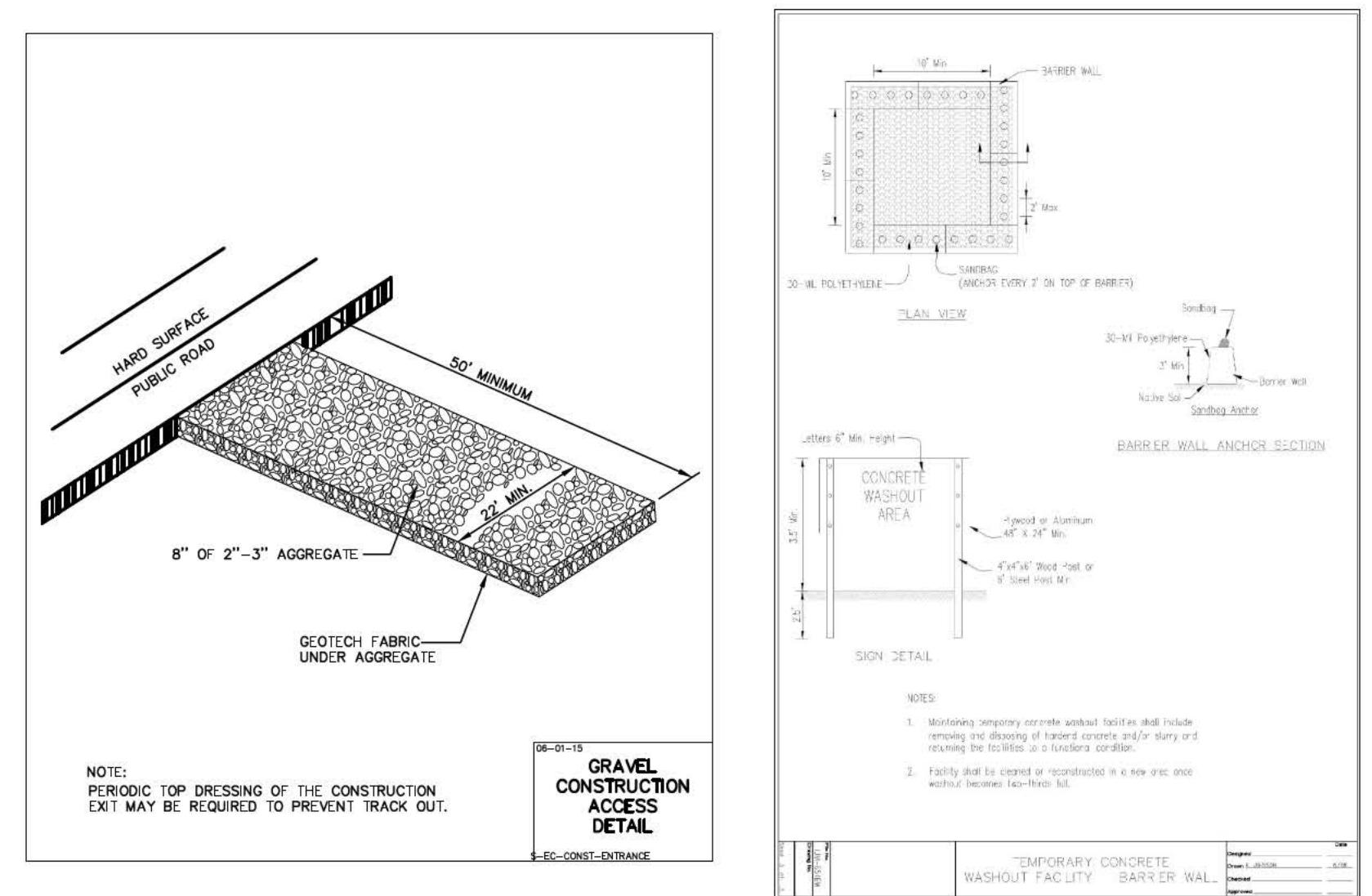
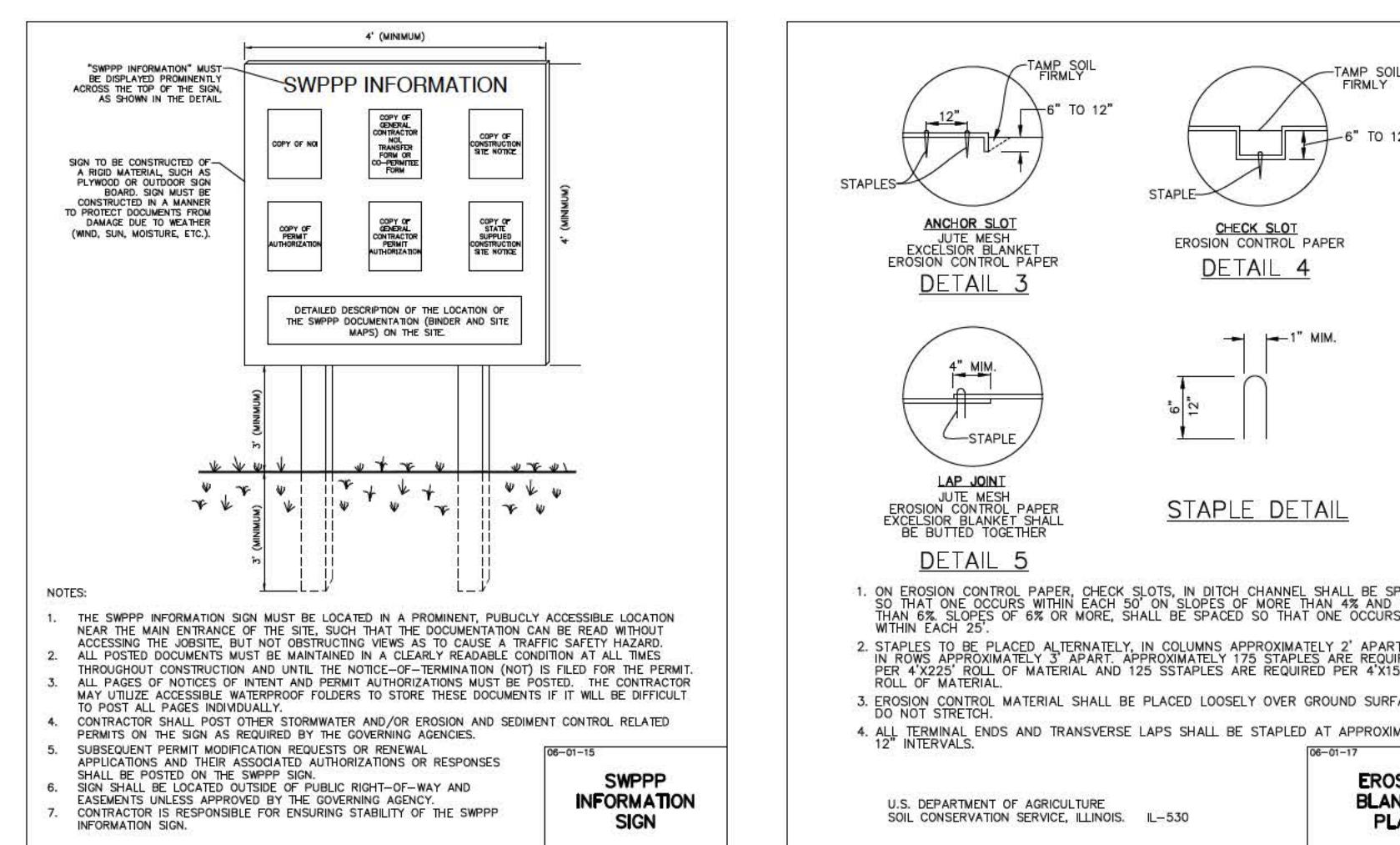
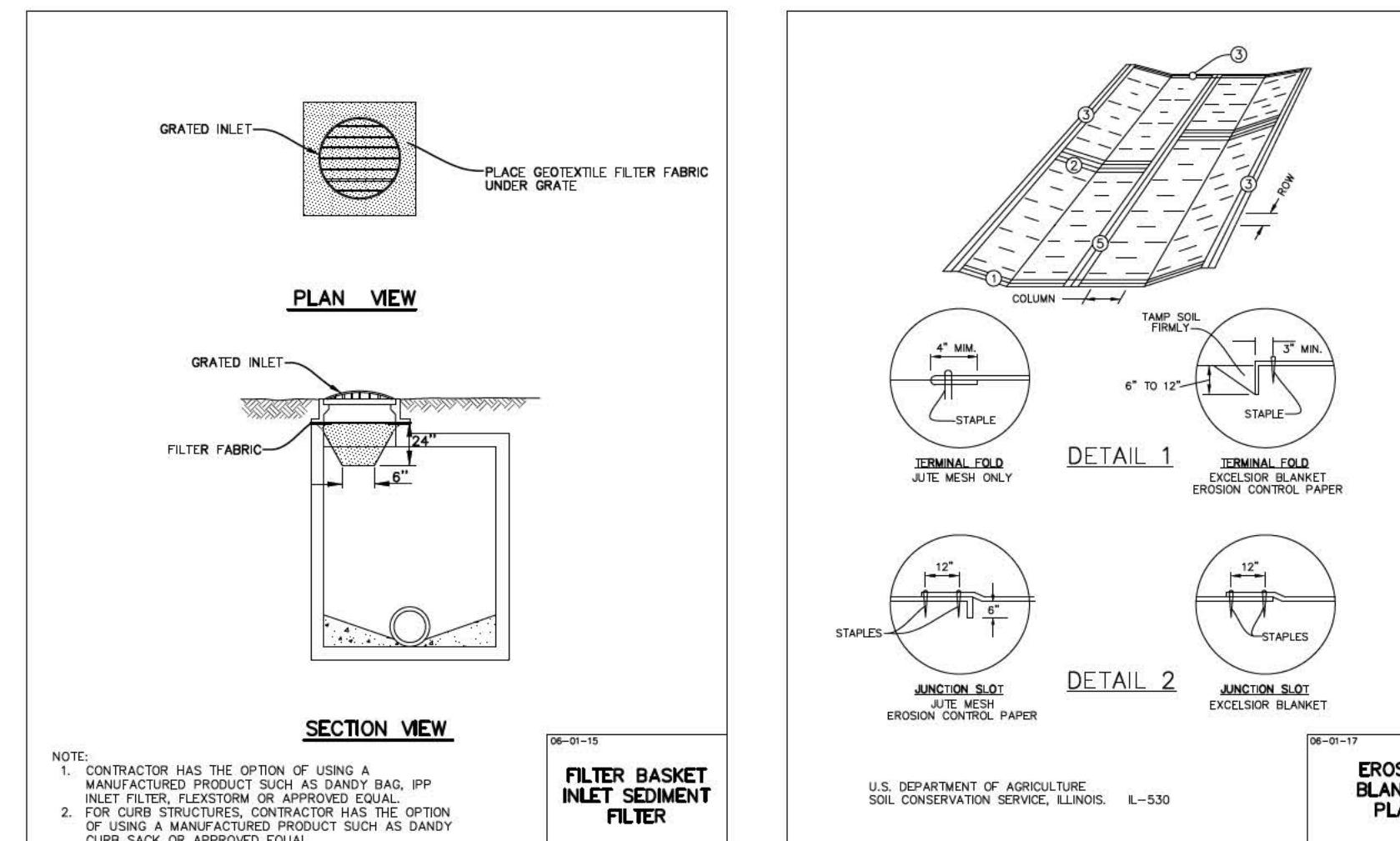
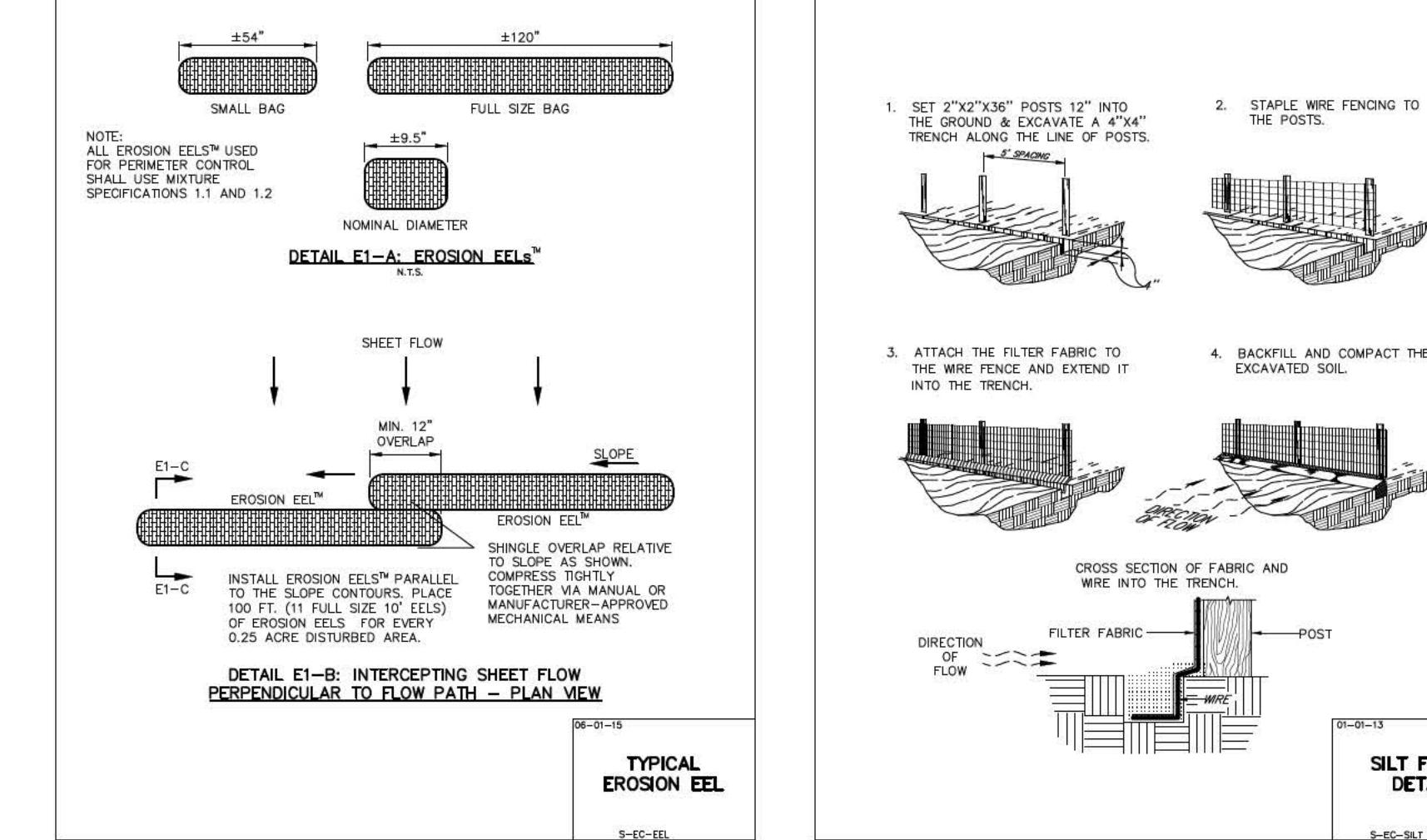
MahendraTM
CONSULTING LTD.

L + D CONSULTING
One Outlook Point, Suite 290, Lincolnshire, IL 60659
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
ph: 847.634.5550 fx: 847.634.0095 mardhard.com

01-01-16	
VOLUME CONTROL REQUIREMENT	
SITE AREA	0.86 S.F.
SITE IMPERVIOUS AREA	0.693 ACRES
VOL CONTROL REQUIRED	$=(0.693)*(0.083)$ $=0.0575 \text{ AC-FT}$ $=2,504.44 \text{ CF}$
VOL CONTROL PROVIDED	=3,085.49 CF

MAINTENANCE SUMMARY





"THESE EROSION CONTROL PLANS ARE A PORTION OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA) TOTAL REQUIREMENTS FOR A COMPLETE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS REQUIRED BY THE GENERAL NPDES PERMIT NO. ILR10. CLIENT AND/OR CONTRACTOR WILL BE RESPONSIBLE FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE GENERAL NPDES PERMIT AND COMPILATION OF THE COMPLETE SWPPP."

INSTRUCTION SEQUENCE:

INSTALL SILT FENCE AT LOCATIONS AS INDICATED ON THE PLANS.

PROVIDE STABILIZED CONSTRUCTION ENTRANCE.

CONSTRUCT TEMPORARY DITCHES, SWALES, SEDIMENT TRAPS AND/OR BASINS.

STRIP EXISTING TOPSOIL OR PAVEMENT FROM PROPOSED LIMITS OF DISTURBANCE AND STOCKPILE WHERE SHOWN ON PLANS.

PROVIDE SILT FENCE AROUND THE BASE OF THE STOCKPILES.

CONSTRUCT STORMWATER MANAGEMENT (VOLUME CONTROL) FACILITIES TO SUB-GRADE AND INSTALL OUTLET PIPES.

CUT AND FILL SITE TO PLAN SUB-GRADE.

CONSTRUCT UNDERGROUND IMPROVEMENTS, i.e. SANITARY SEWER WATERMAIN AND STORM SEWER**, ETC.

CONSTRUCT PAVEMENT IMPROVEMENTS PER PLAN.

COMPLETE CONSTRUCTION OF SITE WITH PERMANENT STABILIZATION.

REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

** INSTALL INLET PROTECTION AROUND DRAINAGE STRUCTURES AS CONSTRUCTED.

IL EROSION AND SEDIMENTATION CONTROL GENERAL NOTES:

ALL VEGETATIVE AND STRUCTURAL EROSION CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE "ILLINOIS URBAN MANUAL".

MAINTENANCE AND REPLACEMENT OF EROSION CONTROL ITEMS, WHEN DIRECTED BY THE OWNER, SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.

THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER OR EQUIVALENT SNOWFALL. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF SAID MEASURES SHALL BE MADE IMMEDIATELY.

IMMEDIATELY.

INSTALL ALL PERIMETER SILT FENCING PRIOR TO ANY CLEARING OR GRADING. ONSITE SEDIMENT CONTROL MEASURES AS SHOWN AND SPECIFIED BY THIS EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE CONSTRUCTED AND FUNCTIONAL PRIOR TO INITIATING CLEARING, GRADING, STRIPPING, EXCAVATION OR FILLING ACTIVITIES ON THE SITE.

STRIPPING, EXCAVATION OR HEAVING ACTIVITIES ON THE SITE.
IF STORMWATER DETENTION IS NOT REQUIRED THE CONTRACTOR SHALL CONSTRUCT DITCHES, SWALES, SEDIMENT TRAPS AND SILTATION CONTROL MEASURES AS REQUIRED TO INTERCEPT SURFACE WATERS BEFORE THEY FLOW ONTO ADJACENT PROPERTY.

STABILIZATION OF DISTURBED AREAS MUST BE INITIATED

STABILIZATION OF DISTURBED AREAS MUST BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND

TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR

TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES
AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT
LATER THAN 14 DAYS FROM THE INITIATION OF STABILIZATION
WORK IN AN AREA.

TEMPORARY SEED MIXTURE SHALL BE APPLIED AT 64 LBS/ACRE.

INLET PROTECTION SHALL BE INSTALLED UNDER THE GRATING OF EACH DRAINAGE STRUCTURE.

STABILIZATION OF TOPSOIL STOCKPILES SHALL BE INITIATED IMMEDIATELY UPON COMPLETION UNLESS THEY WILL BE

IMMEDIATELY UPON COMPLETION UNLESS THEY WILL BE DISTURBED WITHIN FOURTEEN (14) CALENDAR DAYS. STABILIZATION OF STOCKPILES MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM

SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM THE INITIATION OF STABILIZATION WORK IN AN AREA. ALL SOIL STORAGE PILES SHALL BE PROTECTED FROM EROSION WITH SILT FENCE ON THE DOWN SLOPE SIDE OF THE PILES. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT RACING OR SILT TRAPS. DEWATERING

INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER STRUCTURES IS PROHIBITED.

WATER PUMPED DURING CONSTRUCTION OPERATION SHALL BE

WATER PUMPED DURING CONSTRUCTION OPERATION SHALL BE FILTERED.

DUST CONTROL SHALL BE PERFORMED ON A DAILY BASIS USING WATER DISPERSED FROM A TRUCK MOUNTED TANK WITH STANDARD DISCHARGE HEADER TO PROVIDE A UNIFORM

RATE OF APPLICATION.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCES SHALL BE MAINTAINED, ADJUSTED OR RELOCATED AS NECESSARY TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC ROADWAYS. ANY SEDIMENT REACHING A PUBLIC ROAD SHALL

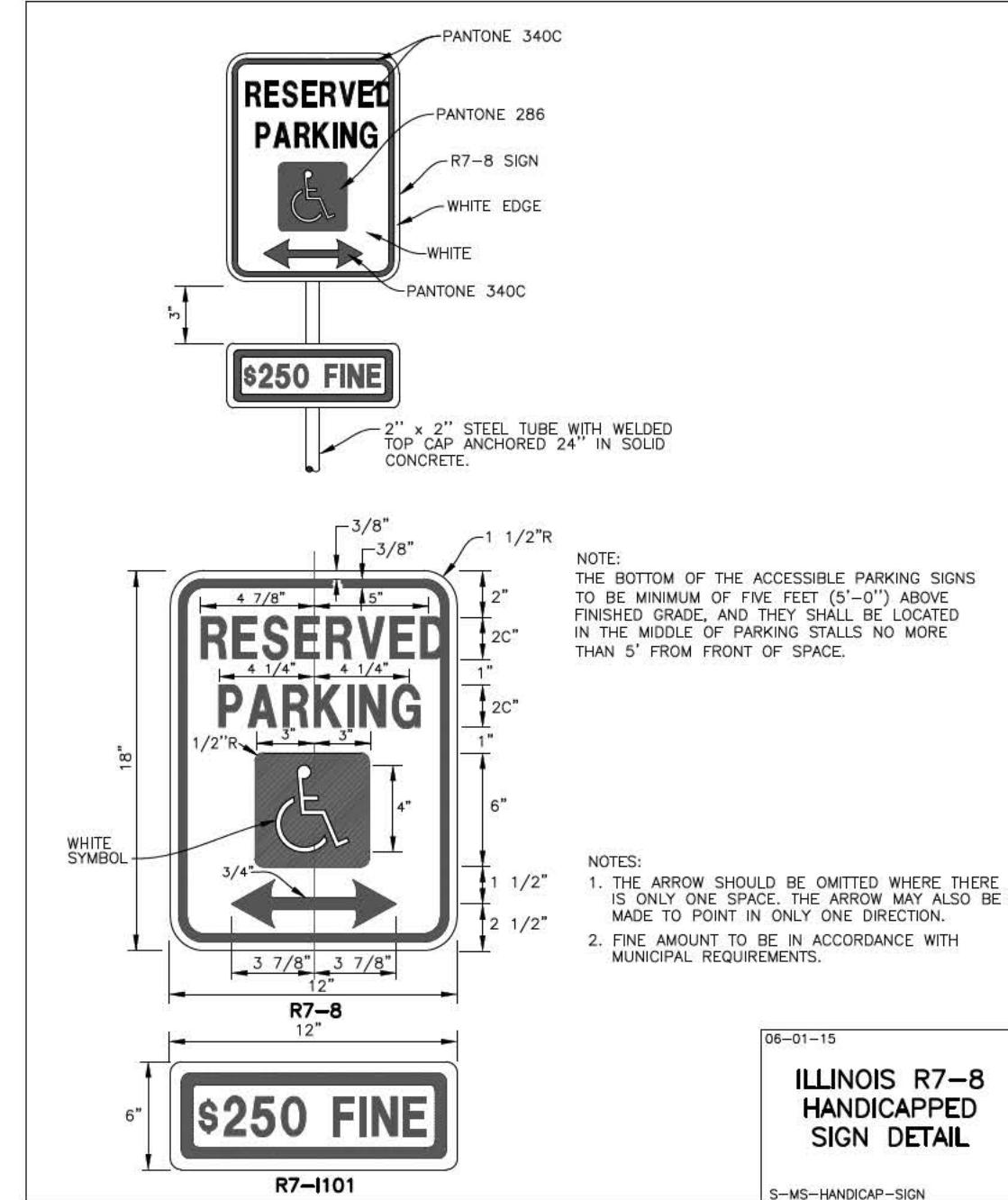
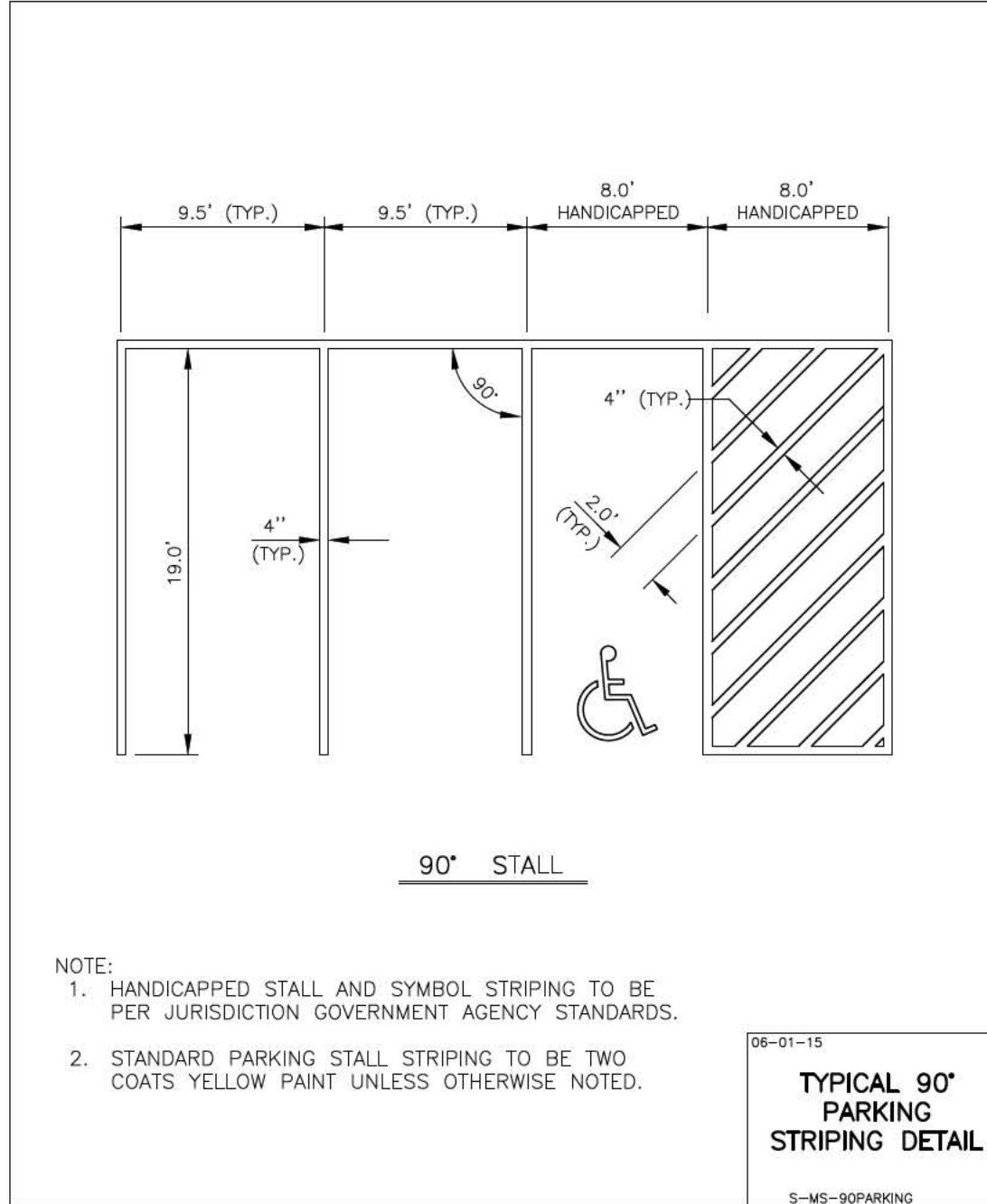
ANY LOOSE MATERIAL THAT IS DEPOSITED IN THE FLOW LINE

ANY FUGITIVE MATERIAL THAT IS DEPOSITED IN THE FLOW LINE
OF ANY GUTTER OR DRAINAGE STRUCTURE DURING
CONSTRUCTION OPERATIONS SHALL BE REMOVED AT THE
CLOSE OF EACH WORKING DAY.

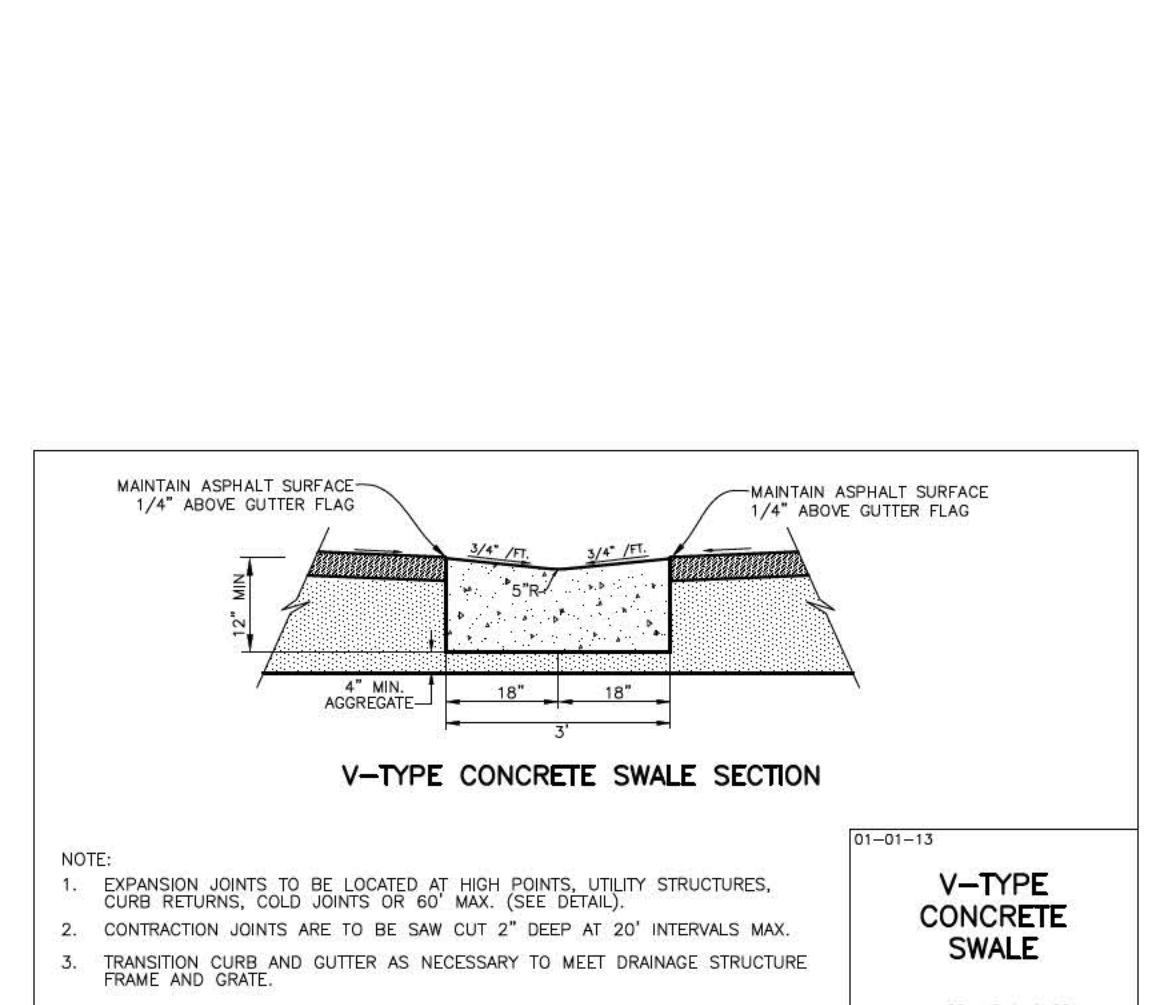
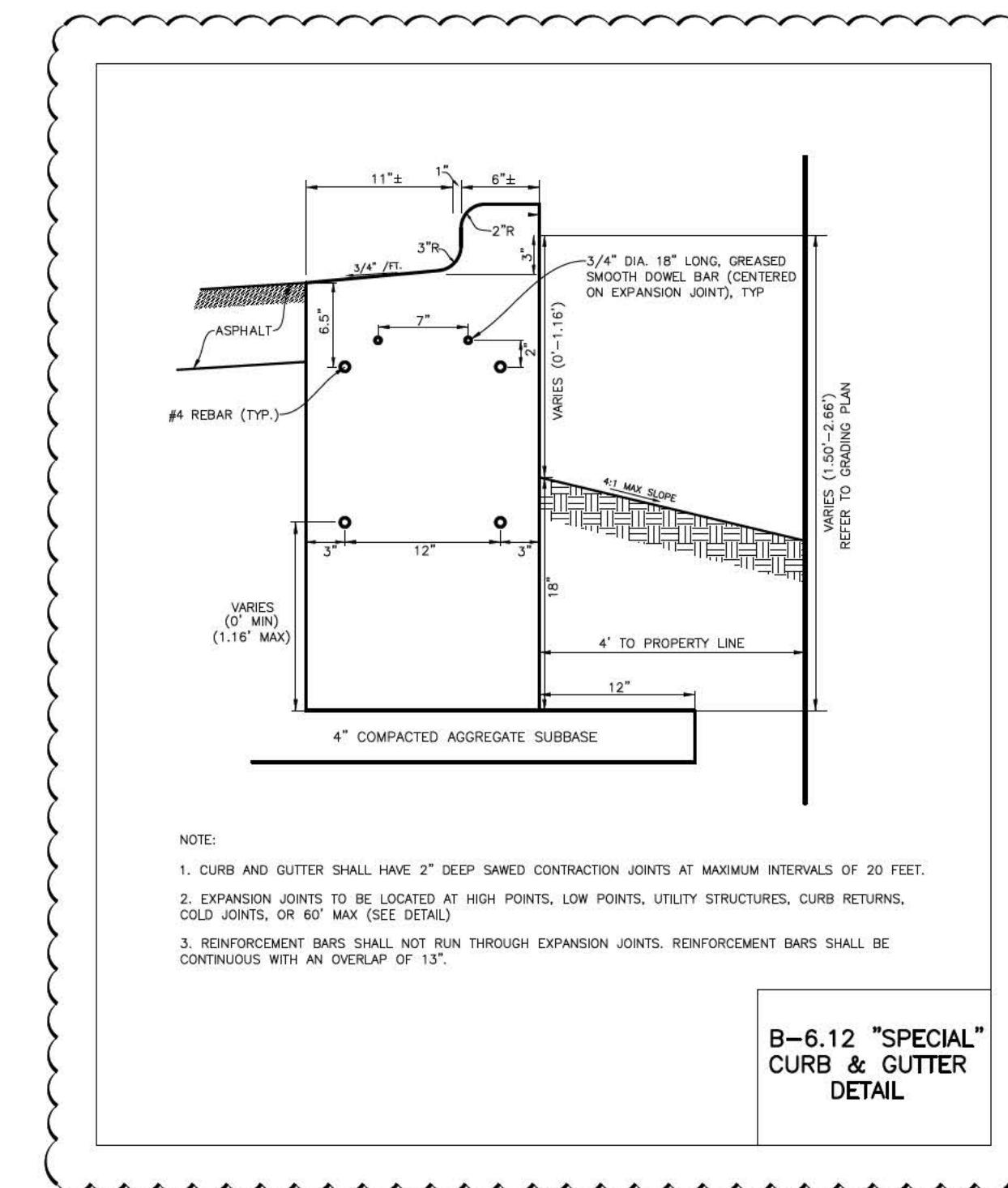
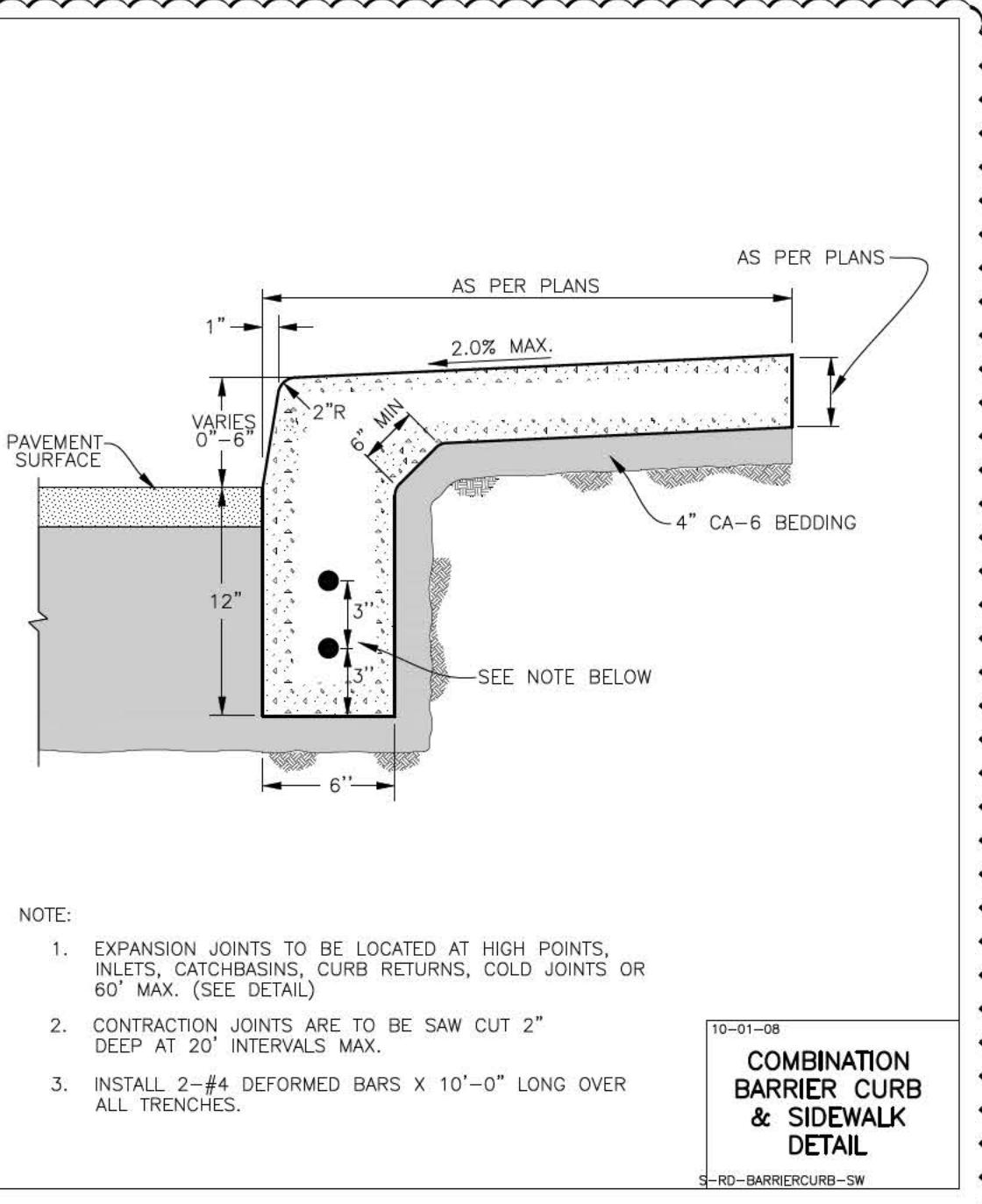
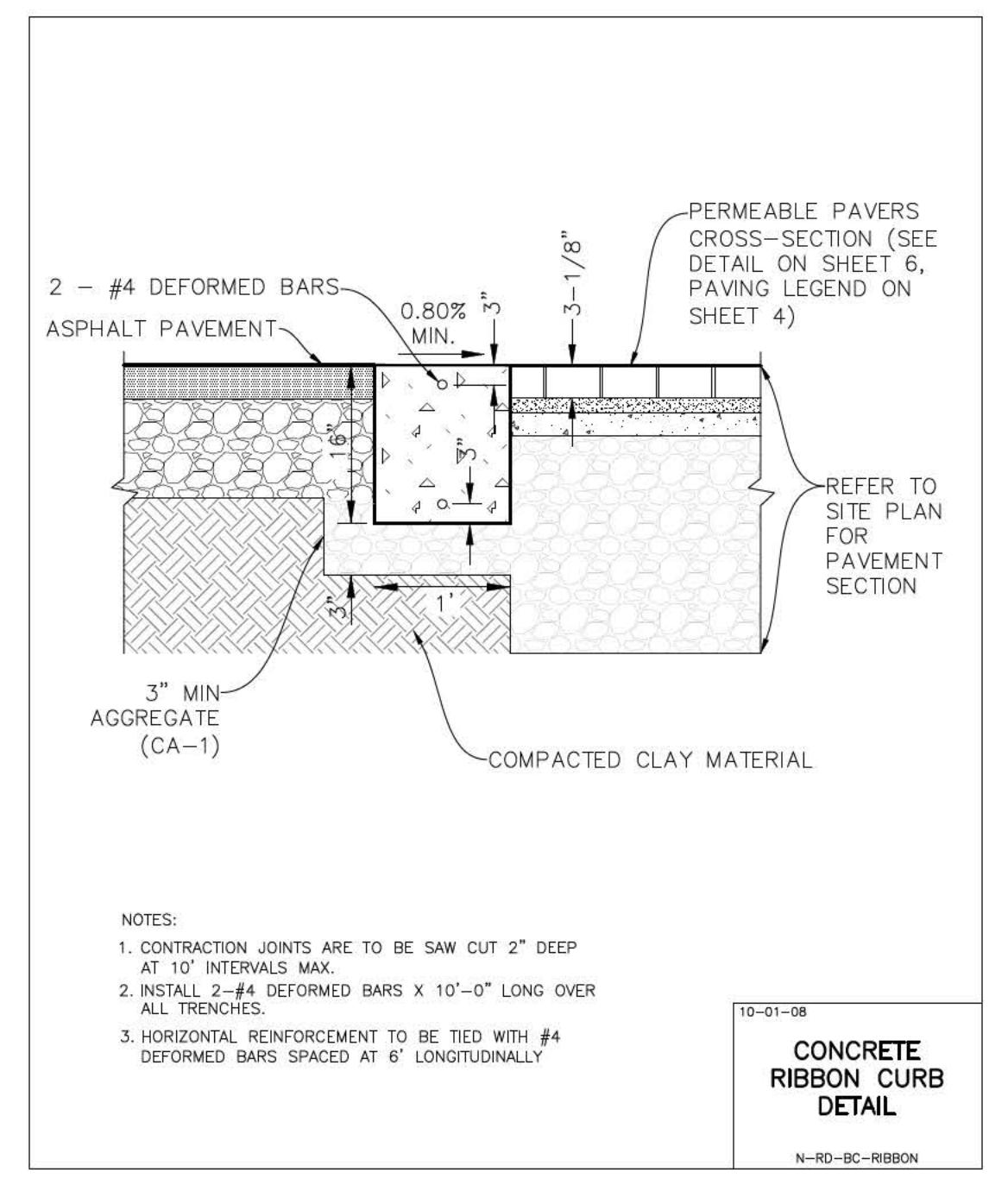
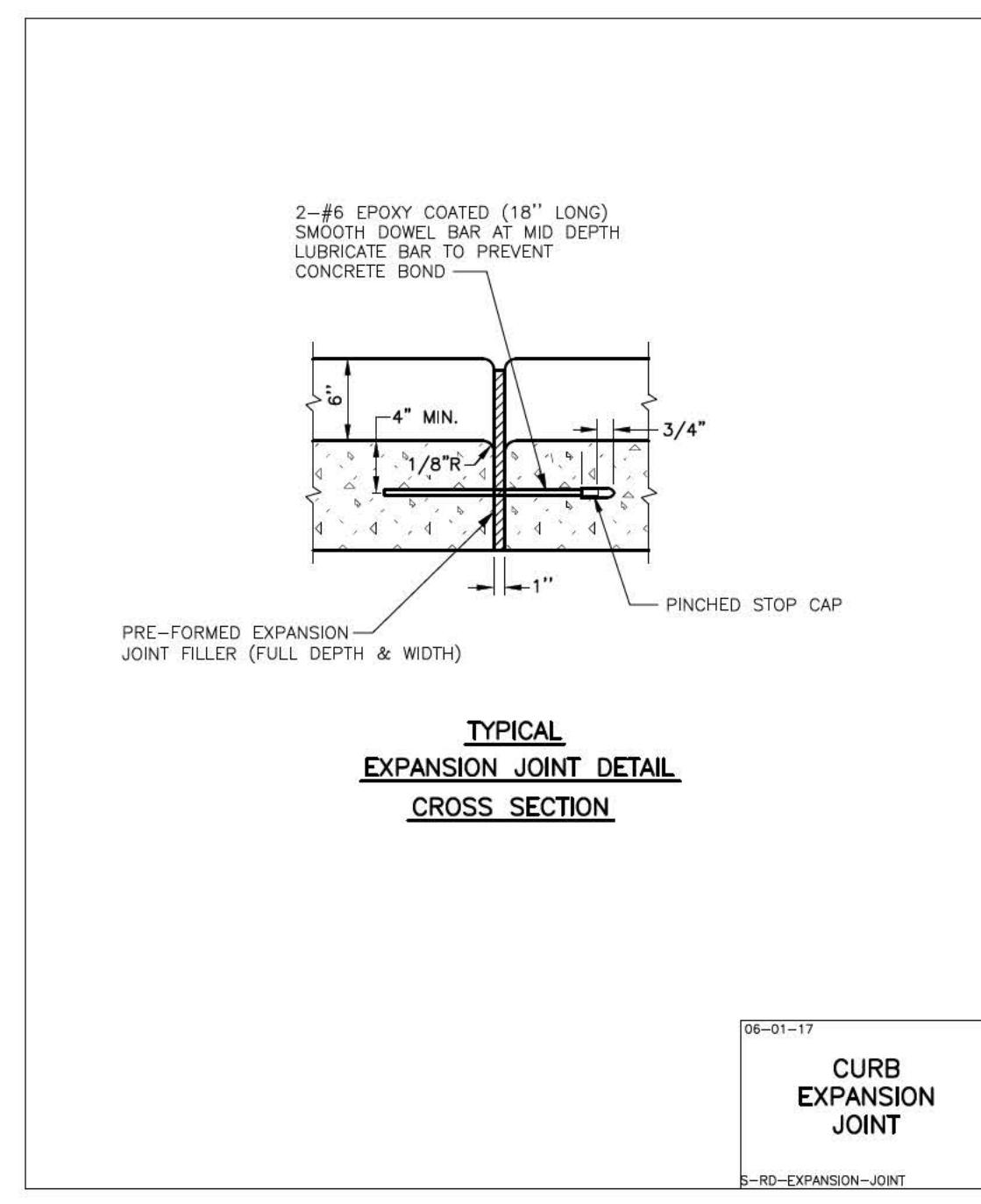
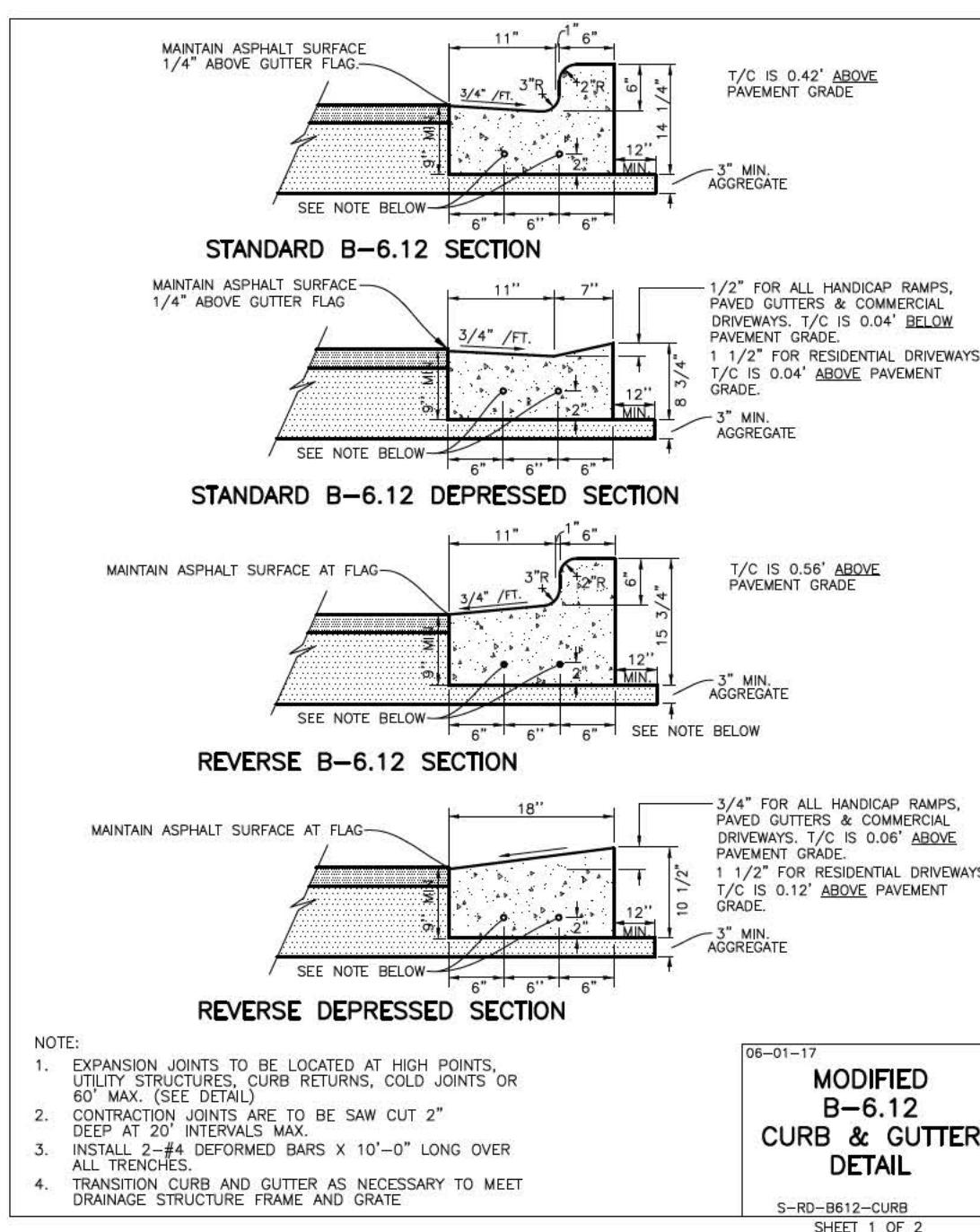
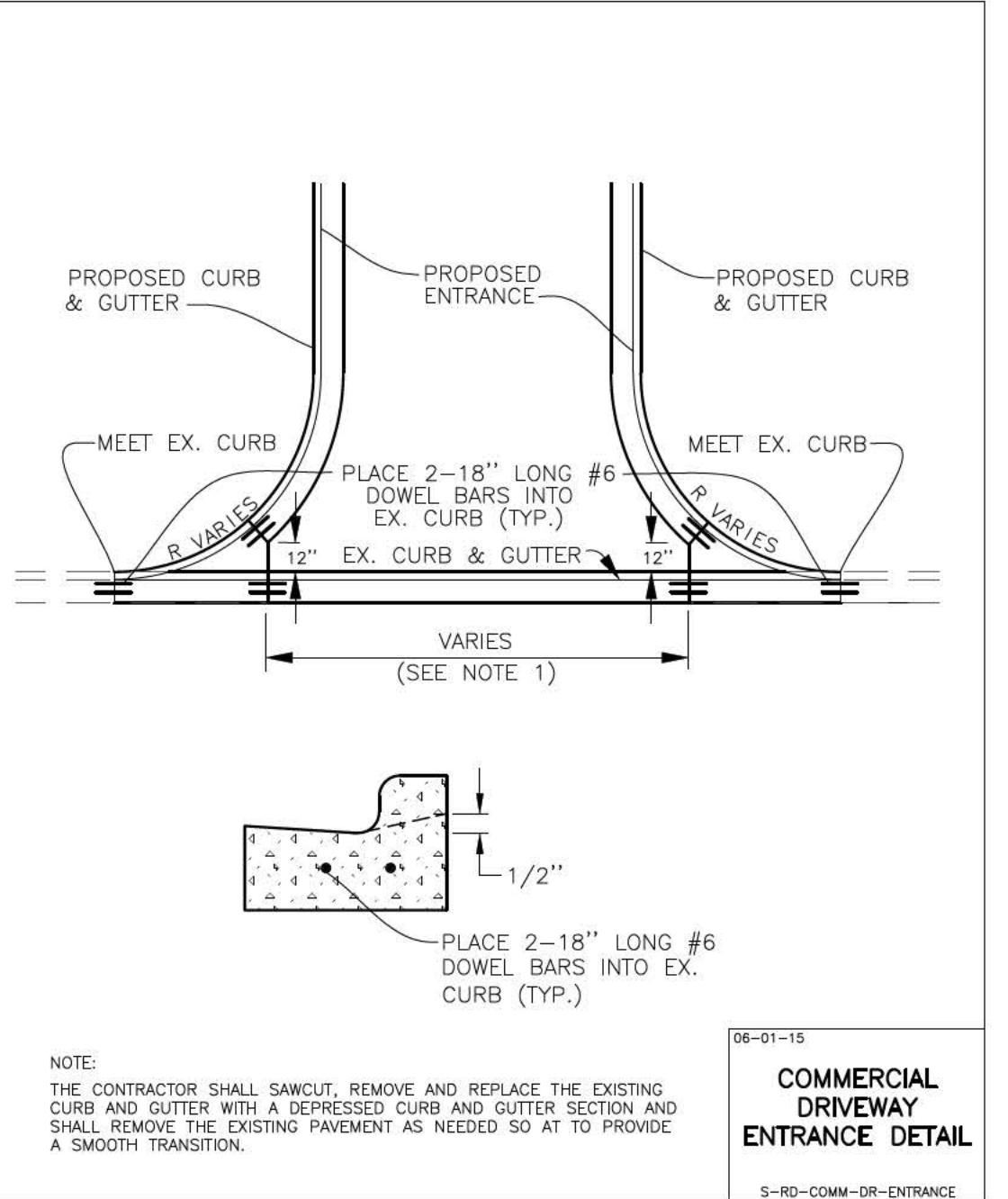
THE EROSION CONTROL MEASURES INDICATED ON THE PLANS
ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES
MAY BE REQUIRED, AS DIRECTED BY THE CLIENT OR OTHER

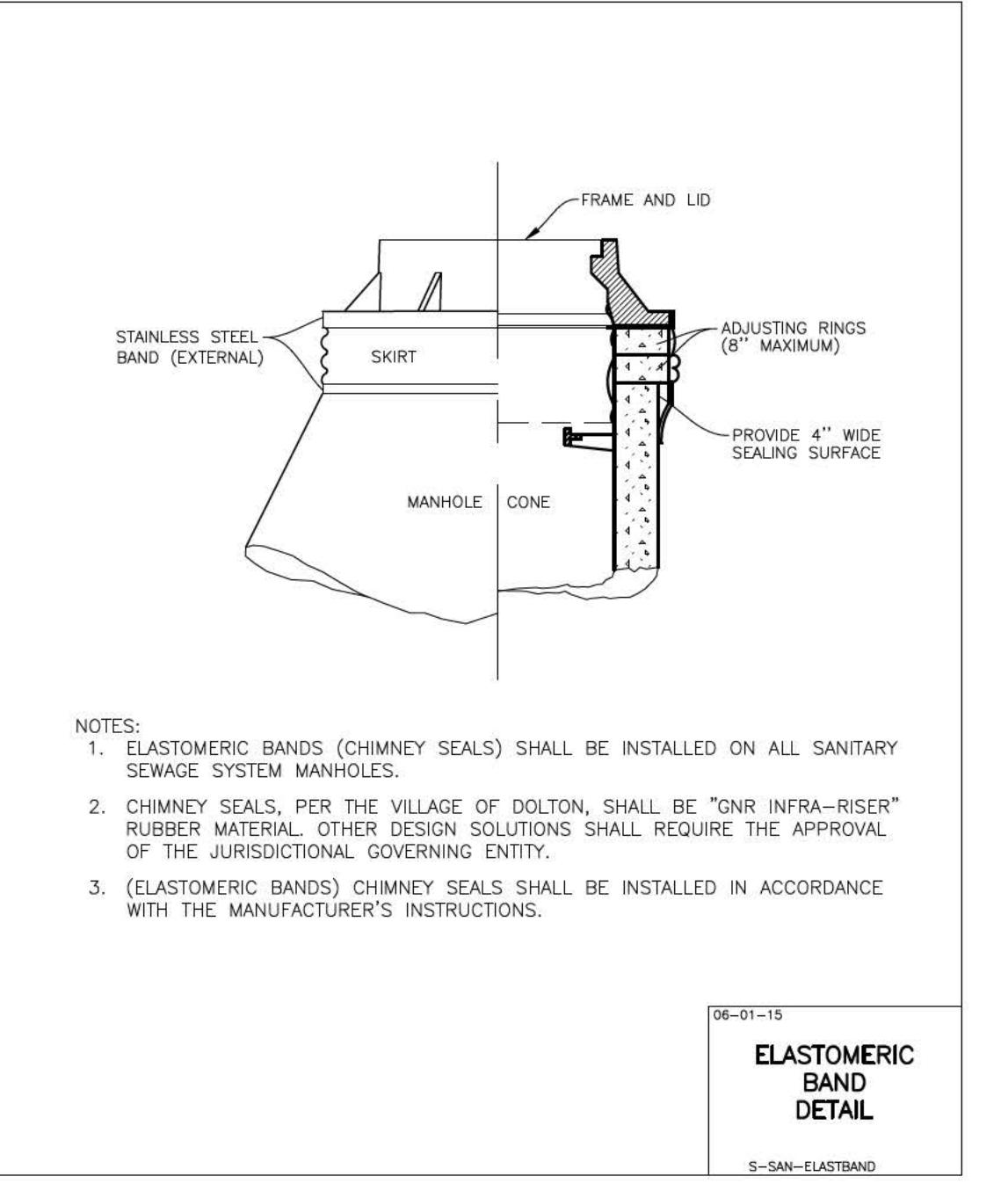
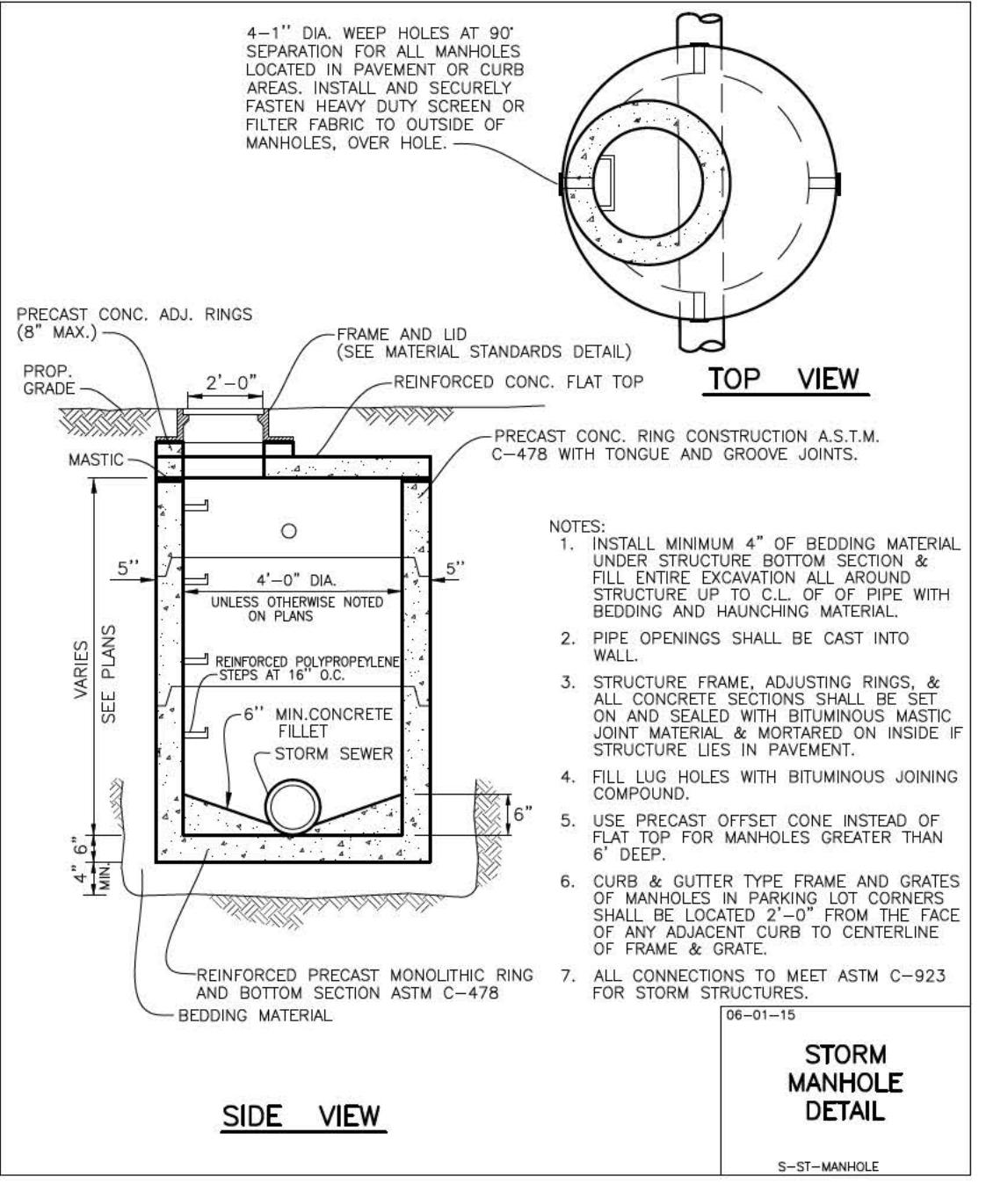
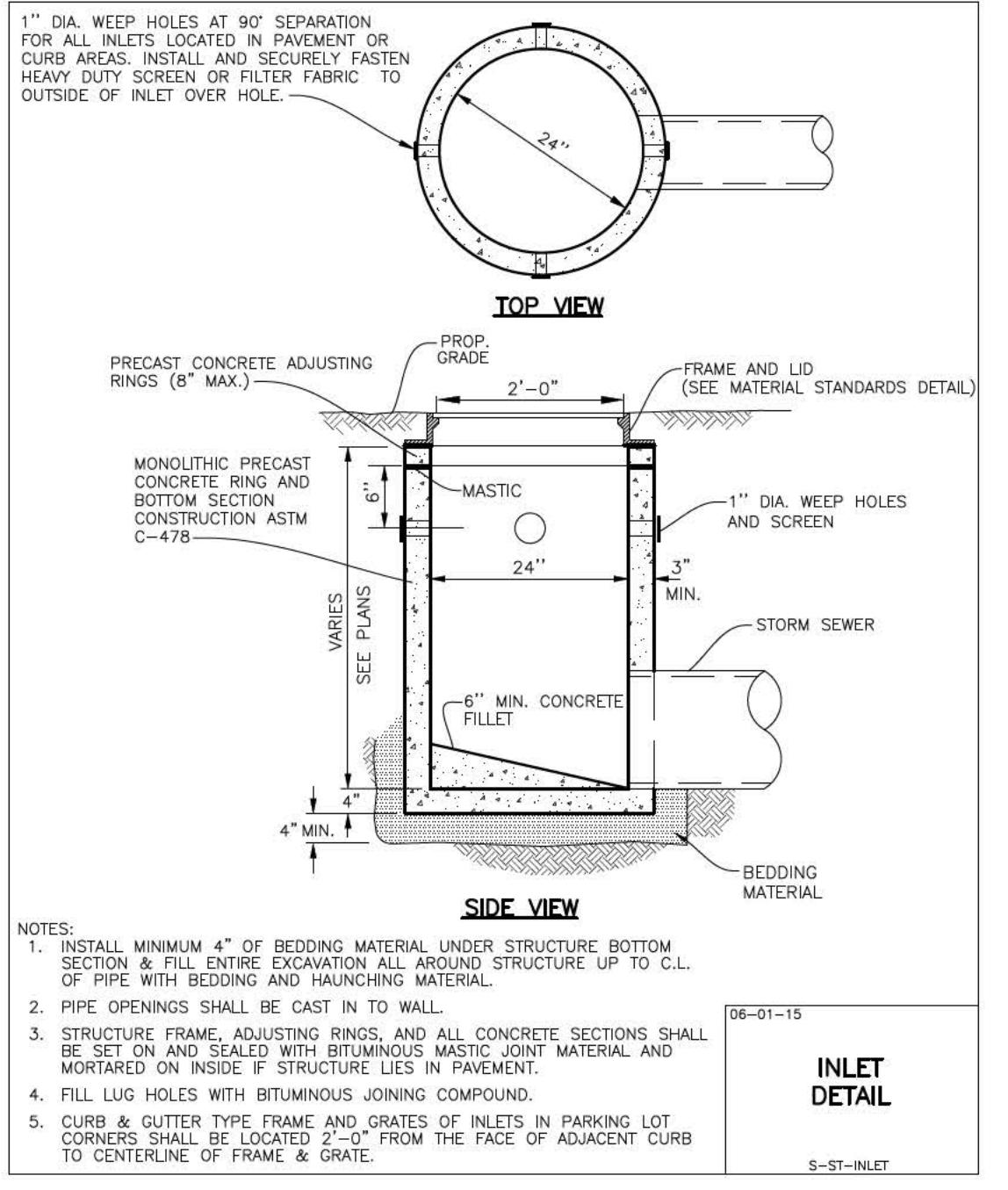
JURISDICTIONAL GOVERNMENTAL ENTITIES.
ALL EROSION AND SEDIMENTATION CONTROL MEASURES
SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH
ALL JURISDICTIONAL GOVERNMENTAL AGENCY REQUIREMENTS
WITHIN 30 DAYS OF FINAL STABILIZATION.

PROJ. MGR.:	TTR
PROJ. ASSOC.:	JRC
DRAWN BY:	MH
DATE:	08-05-19
SCALE:	1" = 20'
SHEET	
8 OF 13	
AETDOIL01	



MATERIAL STANDARDS		
ITEM	BRAND	PRODUCT
<u>FIRE HYDRANTS</u> (TRAFFIC MODEL)	MUELLER SUPER CENTURION WATEROUS PACER	A-423 WB-67
<u>GATE VALVES</u> SPECIFY SIZE NON- RISING STEM, 2" NUT, M.J., OPEN LEFT	MUELLER (SIZE) AMERICAN FLOW CONTROL	A-2360-20L SERIES 2500
<u>VALVE BOXES</u> 3 PIECE	EAST JORDAN TYLER/UNION	SCREW ADJUSTING EXTENSION TYPE
<u>CURB STOPS</u> (SPECIFY SIZE)	MUELLER FORD	300 BALL VALVE BALL VALVE
<u>CORPORATION VALVE</u> (SPECIFY SIZE)	MUELLER FORD	H-15000 FB600 (AWWA/CC THREAD)
<u>MANHOLES/CATCHBASINS/INLETS</u> IN OPEN AREAS AND PAVEMENT (SELF-SEALING LID WITH PROPER UTILITY MARKINGS)	NEENAH CLOSED LID OPEN LID *1 SWALES AND DITCHES	R-1772 R-2502 C R-4340 B
<u>MANHOLES/CATCH BASINS/INLETS</u> IN COMBINATION CURB & GUTTER (BICYCLE SAFE)	NEENAH ROLL/MOUNTABLE CURB B6.12 CURB	R-3501-D2A R-3281A *-3281-AL
<u>WATER SERVICE SADDLES</u> (ALL SERVICE SADDLES SHALL BE DOUBLE STRAP; BRONZE, NYLON COATED OR STAINLESS STEEL)	MUELLER FORD SMITH-BLAIR 3/4" & 1"	DR2S FS 303 # 317
<u>B-BOX</u> (AT LEAST 1 1/4" TOP SECTION) ARCH PATTERN PLUG STYLE LID	FORD MUELLER	EA2 CURB BOX
*1 WHEREVER STORMWATER COULD POSSIBLY ENTER STORM STRUCTURE		06-01-15
		MATERIAL STANDARDS
		S-MS-MATERIALSTNDS





**STANDARD SPECIFICATIONS FOR WATER AND SEWER
CONSTRUCTION IN ILLINOIS, LATEST EDITION.**

41-2.01 PROTECTION OF WATER MAIN AND WATER SERVICE LINES

41-2.01A GENERAL

Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows:

41-2.01B HORIZONTAL SEPARATION – WATER MAINS AND SEWERS

- Water mains shall be located at least ten (10) feet (3.1 m) horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.

Water mains may be located closer than ten (10) feet (3.1 m) to a sewer line when:

 - local conditions prevent a lateral separation of ten (10) feet (3.1 m); and
 - the water main invert is at least eighteen (18) inches (460 mm) above the crown of the sewer; and
 - the water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.

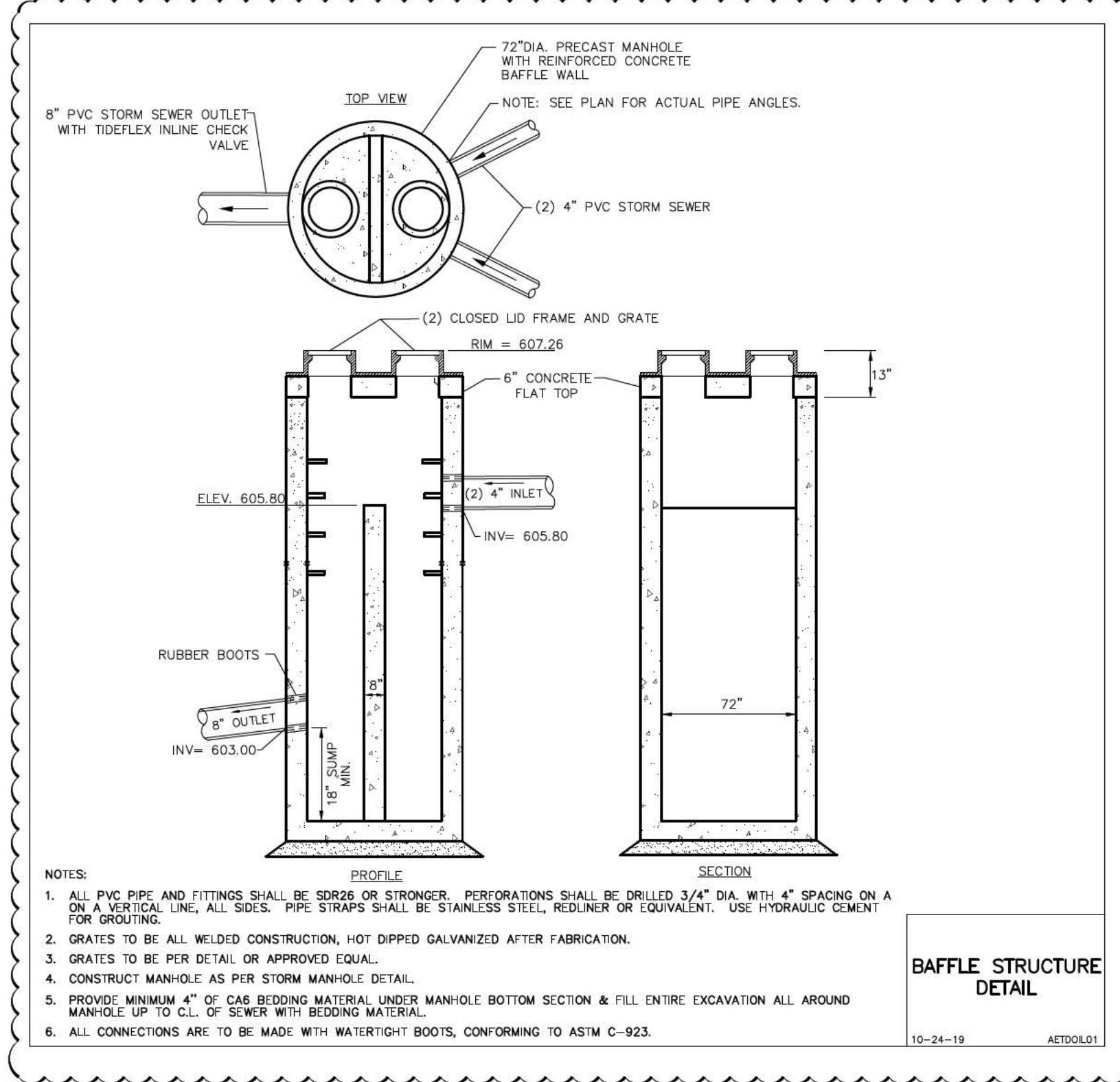
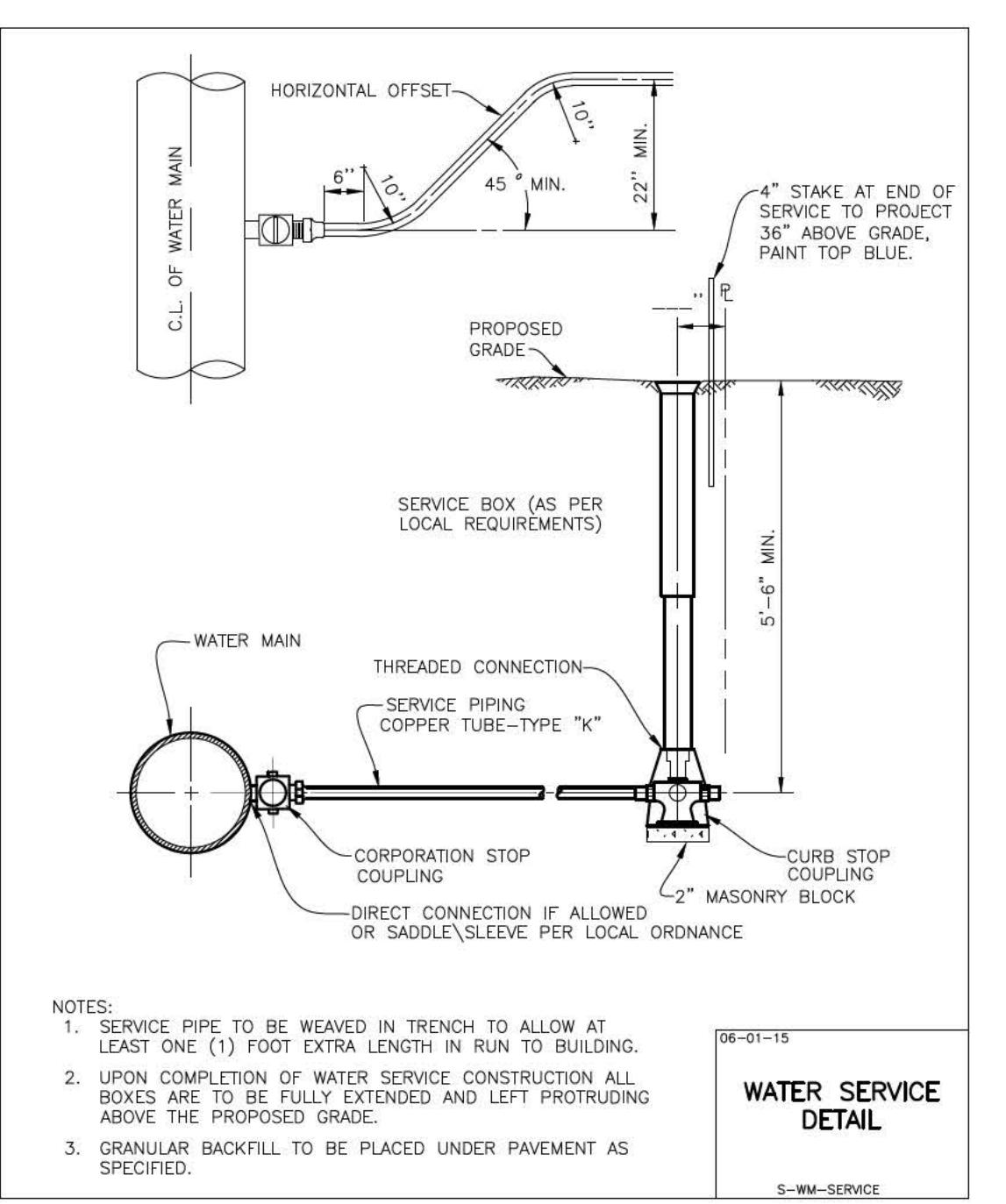
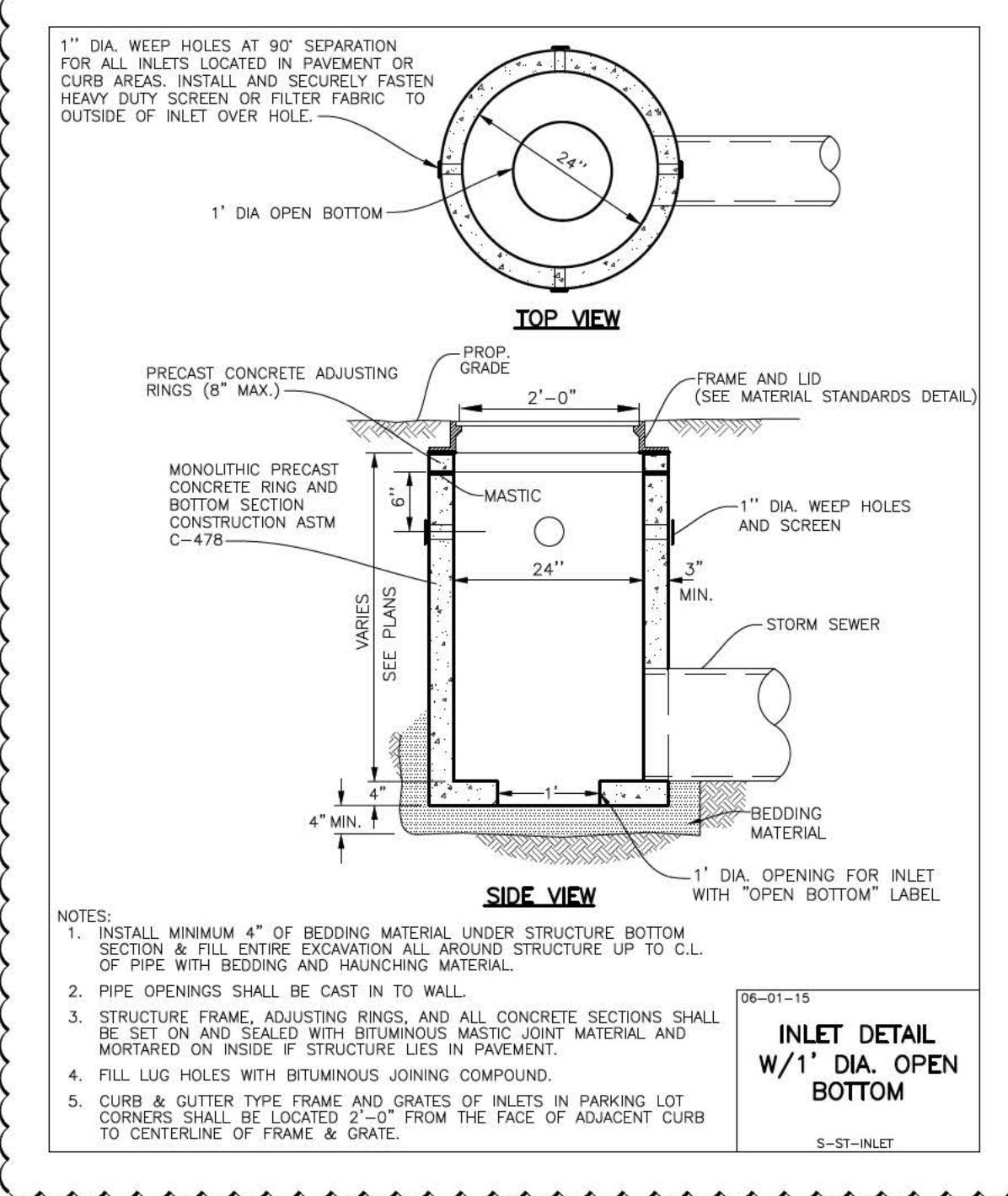
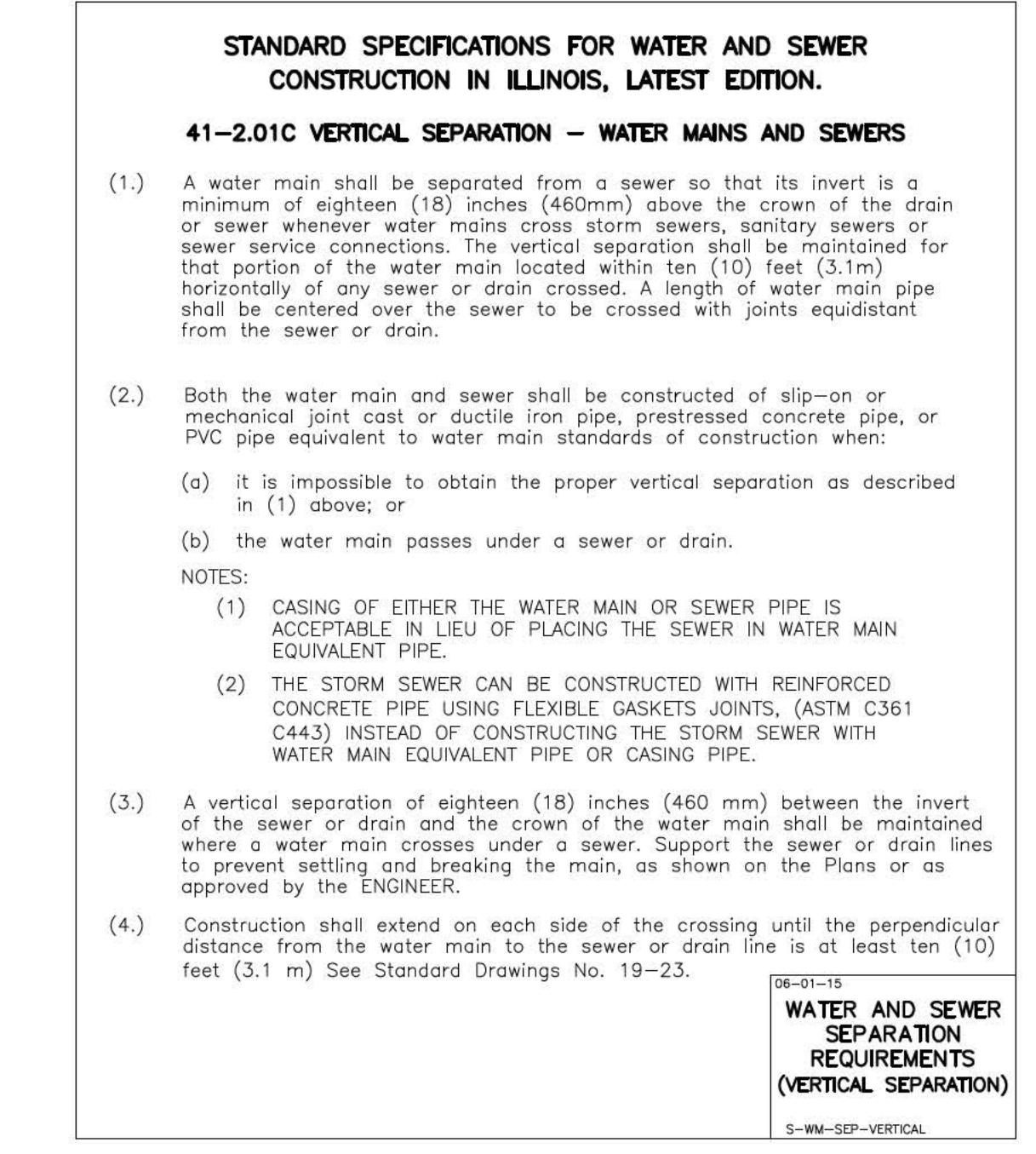
When it is impossible to meet (1) or (2) above, both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling. See

mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction when:

 - it is impossible to obtain the proper vertical separation as described in (1) above; or
 - the water main passes under a sewer or drain.

NOTES:

 - CASING OF EITHER THE WATER MAIN OR SEWER PIPE IS ACCEPTABLE IN LIEU OF PLACING THE SEWER IN WATER MAIN EQUIVALENT PIPE.
 - THE STORM SEWER CAN BE CONSTRUCTED WITH REINFORCED CONCRETE PIPE USING FLEXIBLE GASKETS JOINTS, (ASTM C361 C443) INSTEAD OF CONSTRUCTING THE STORM SEWER WITH WATER MAIN EQUIVALENT PIPE OR CASING PIPE.
 - A vertical separation of eighteen (18) inches (460 mm) between the invert of the sewer or drain and the crown of the water main shall be maintained where a water main crosses under a sewer. Support the sewer or drain lines to prevent settling and breaking the main, as shown on the Plans or as approved by the ENGINEER.



TAFFLE STRUCTURE DETAIL

PROPOSED RETAIL DEVELOPMENT

CONSTRUCTION DETAILS

DRAWN BY: RIC
REVIEWED BY: RIC
DATE: 10-19-19
REvised PER INTERNAL REVIEW
REvised PER VILLAGE REVIEW

DRAWN BY: RIC
REVIEWED BY: RIC
DATE: 10-19-19
REvised PER INTERNAL REVIEW
REvised PER VILLAGE REVIEW

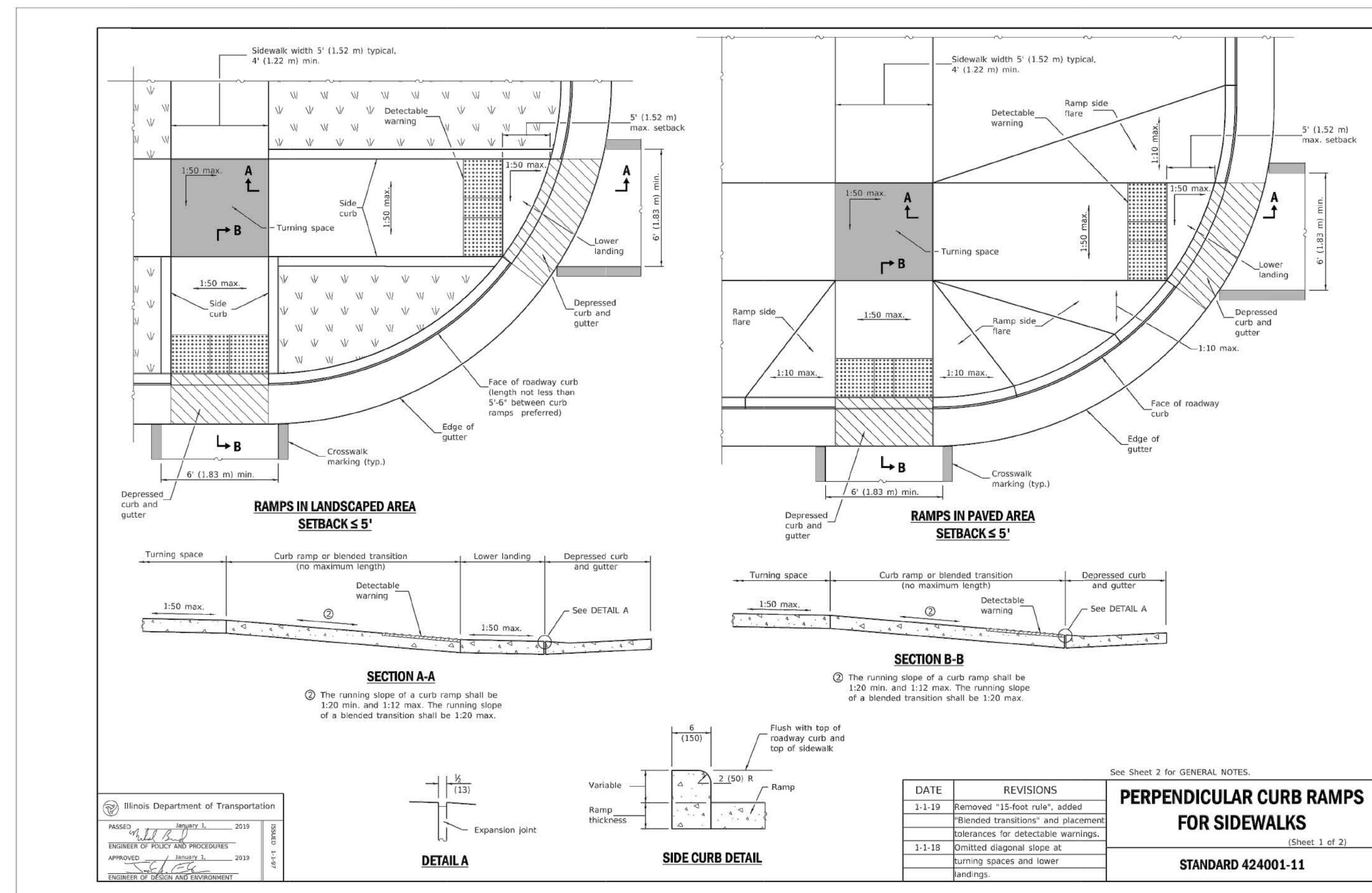
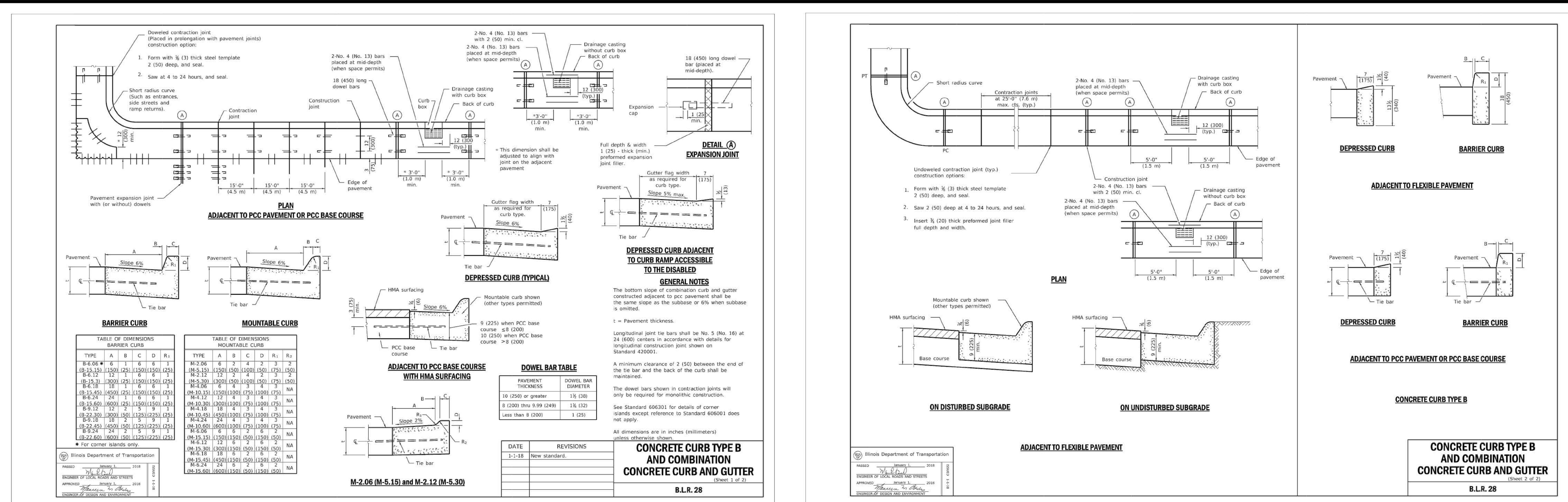
Manhard Consulting Ltd.
One Dordogne, Portage 280, Lincolnshire, 60009 PH47 6A5, K8G 7S5, United Kingdom
Our Business: Water Resources • Wastewater Treatment • Water & Wastewater • Landscaping Services • Landscape Architecture

PROPOSED RETAIL DEVELOPMENT

VILLAGE OF DOLTON, ILLINOIS

CONSTRUCTION DETAILS

A. REFERENCED SPECIFICATIONS		
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTION OF THE FOLLOWING:		
A. ILLINOIS MUNICIPAL CODE (2018 EDITION) FOR SEWER CONSTRUCTION (LATEST EDITION) FOR ALL IMPROVEMENTS EXCEPT SANITARY SEWERS.		
B. STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION.		
C. CAST IRON SOIL PIPE.		
D. DURACONCRETE.		
E. PVC VINYL CHLORIDE PVC PIPE		
F. 6-INCH TO 24-INCH DIAMETER SDR 26		
G. 4-INCH TO 12-INCH DIAMETER F/D-46		
H. WATER MAIN, QUALITY PVC		
I. HIGH DENSITY POLYETHYLENE (HDPE)		
J. 4-INCH TO 24-INCH DIAMETER SDR 26		
K. 4-INCH TO 12-INCH DIAMETER F/D-47 (GASKETED)		
L. AWIA 2000		
M. AWIA 2005		
N. 4-INCH TO 12-INCH DIAMETER F/D-46		
O. 4-INCH TO 12-INCH DIAMETER F/D-47		
P. 4-INCH TO 12-INCH DIAMETER F/D-48		
Q. 4-INCH TO 12-INCH DIAMETER F/D-49		
R. 4-INCH TO 12-INCH DIAMETER F/D-50		
S. 4-INCH TO 12-INCH DIAMETER F/D-51		
T. 4-INCH TO 12-INCH DIAMETER F/D-52		
U. 4-INCH TO 12-INCH DIAMETER F/D-53		
V. 4-INCH TO 12-INCH DIAMETER F/D-54		
W. 4-INCH TO 12-INCH DIAMETER F/D-55		
X. 4-INCH TO 12-INCH DIAMETER F/D-56		
Y. 4-INCH TO 12-INCH DIAMETER F/D-57		
Z. 4-INCH TO 12-INCH DIAMETER F/D-58		
AA. 4-INCH TO 12-INCH DIAMETER F/D-59		
BB. 4-INCH TO 12-INCH DIAMETER F/D-60		
CC. 4-INCH TO 12-INCH DIAMETER F/D-61		
DD. 4-INCH TO 12-INCH DIAMETER F/D-62		
EE. 4-INCH TO 12-INCH DIAMETER F/D-63		
FF. 4-INCH TO 12-INCH DIAMETER F/D-64		
GG. 4-INCH TO 12-INCH DIAMETER F/D-65		
HH. 4-INCH TO 12-INCH DIAMETER F/D-66		
II. 4-INCH TO 12-INCH DIAMETER F/D-67		
JJ. 4-INCH TO 12-INCH DIAMETER F/D-68		
KK. 4-INCH TO 12-INCH DIAMETER F/D-69		
LL. 4-INCH TO 12-INCH DIAMETER F/D-70		
MM. 4-INCH TO 12-INCH DIAMETER F/D-71		
NN. 4-INCH TO 12-INCH DIAMETER F/D-72		
OO. 4-INCH TO 12-INCH DIAMETER F/D-73		
PP. 4-INCH TO 12-INCH DIAMETER F/D-74		
QQ. 4-INCH TO 12-INCH DIAMETER F/D-75		
RR. 4-INCH TO 12-INCH DIAMETER F/D-76		
SS. 4-INCH TO 12-INCH DIAMETER F/D-77		
TT. 4-INCH TO 12-INCH DIAMETER F/D-78		
UU. 4-INCH TO 12-INCH DIAMETER F/D-79		
VV. 4-INCH TO 12-INCH DIAMETER F/D-80		
WW. 4-INCH TO 12-INCH DIAMETER F/D-81		
XX. 4-INCH TO 12-INCH DIAMETER F/D-82		
YY. 4-INCH TO 12-INCH DIAMETER F/D-83		
ZZ. 4-INCH TO 12-INCH DIAMETER F/D-84		
AA. 4-INCH TO 12-INCH DIAMETER F/D-85		
BB. 4-INCH TO 12-INCH DIAMETER F/D-86		
CC. 4-INCH TO 12-INCH DIAMETER F/D-87		
DD. 4-INCH TO 12-INCH DIAMETER F/D-88		
EE. 4-INCH TO 12-INCH DIAMETER F/D-89		
FF. 4-INCH TO 12-INCH DIAMETER F/D-90		
GG. 4-INCH TO 12-INCH DIAMETER F/D-91		
HH. 4-INCH TO 12-INCH DIAMETER F/D-92		
II. 4-INCH TO 12-INCH DIAMETER F/D-93		
JJ. 4-INCH TO 12-INCH DIAMETER F/D-94		
KK. 4-INCH TO 12-INCH DIAMETER F/D-95		
LL. 4-INCH TO 12-INCH DIAMETER F/D-96		
MM. 4-INCH TO 12-INCH DIAMETER F/D-97		
NN. 4-INCH TO 12-INCH DIAMETER F/D-98		
OO. 4-INCH TO 12-INCH DIAMETER F/D-99		
PP. 4-INCH TO 12-INCH DIAMETER F/D-100		
QQ. 4-INCH TO 12-INCH DIAMETER F/D-101		
RR. 4-INCH TO 12-INCH DIAMETER F/D-102		
SS. 4-INCH TO 12-INCH DIAMETER F/D-103		
TT. 4-INCH TO 12-INCH DIAMETER F/D-104		
UU. 4-INCH TO 12-INCH DIAMETER F/D-105		
VV. 4-INCH TO 12-INCH DIAMETER F/D-106		
WW. 4-INCH TO 12-INCH DIAMETER F/D-107		
XX. 4-INCH TO 12-INCH DIAMETER F/D-108		
YY. 4-INCH TO 12-INCH DIAMETER F/D-109		
ZZ. 4-INCH TO 12-INCH DIAMETER F/D-110		
AA. 4-INCH TO 12-INCH DIAMETER F/D-111		
BB. 4-INCH TO 12-INCH DIAMETER F/D-112		
CC. 4-INCH TO 12-INCH DIAMETER F/D-113		
DD. 4-INCH TO 12-INCH DIAMETER F/D-114		
EE. 4-INCH TO 12-INCH DIAMETER F/D-115		
FF. 4-INCH TO 12-INCH DIAMETER F/D-116		
GG. 4-INCH TO 12-INCH DIAMETER F/D-117		
HH. 4-INCH TO 12-INCH DIAMETER F/D-118		
II. 4-INCH TO 12-INCH DIAMETER F/D-119		
JJ. 4-INCH TO 12-INCH DIAMETER F/D-120		
KK. 4-INCH TO 12-INCH DIAMETER F/D-121		
LL. 4-INCH TO 12-INCH DIAMETER F/D-122		
MM. 4-INCH TO 12-INCH DIAMETER F/D-123		
NN. 4-INCH TO 12-INCH DIAMETER F/D-124		
OO. 4-INCH TO 12-INCH DIAMETER F/D-125		
PP. 4-INCH TO 12-INCH DIAMETER F/D-126		
QQ. 4-INCH TO 12-INCH DIAMETER F/D-127		
RR. 4-INCH TO 12-INCH DIAMETER F/D-128		
SS. 4-INCH TO 12-INCH DIAMETER F/D-129		
TT. 4-INCH TO 12-INCH DIAMETER F/D-130		
UU. 4-INCH TO 12-INCH DIAMETER F/D-131		
VV. 4-INCH TO 12-INCH DIAMETER F/D-132		
WW. 4-INCH TO 12-INCH DIAMETER F/D-133		
XX. 4-INCH TO 12-INCH DIAMETER F/D-134		
YY. 4-INCH TO 12-INCH DIAMETER F/D-135		
ZZ. 4-INCH TO 12-INCH DIAMETER F/D-136		
AA. 4-INCH TO 12-INCH DIAMETER F/D-137		
BB. 4-INCH TO 12-INCH DIAMETER F/D-138		
CC. 4-INCH TO 12-INCH DIAMETER F/D-139		
DD. 4-INCH TO 12-INCH DIAMETER F/D-140		
EE. 4-INCH TO 12-INCH DIAMETER F/D-141		
FF. 4-INCH TO 12-INCH DIAMETER F/D-142		
GG. 4-INCH TO 12-INCH DIAMETER F/D-143		
HH. 4-INCH TO 12-INCH DIAMETER F/D-144		
II. 4-INCH TO 12-INCH DIAMETER F/D-145		
JJ. 4-INCH TO 12-INCH DIAMETER F/D-146		
KK. 4-INCH TO 12-INCH DIAMETER F/D-147		
LL. 4-INCH TO 12-INCH DIAMETER F/D-148		
MM. 4-INCH TO 12-INCH DIAMETER F/D-149		
NN. 4-INCH TO 12-INCH DIAMETER F/D-150		
OO. 4-INCH TO 12-INCH DIAMETER F/D-151		
PP. 4-INCH TO 12-INCH DIAMETER F/D-152		
QQ. 4-INCH TO 12-INCH DIAMETER F/D-153		
RR. 4-INCH TO 12-INCH DIAMETER F/D-154		
SS. 4-INCH TO 12-INCH DIAMETER F/D-155		
TT. 4-INCH TO 12-INCH DIAMETER F/D-156		
UU. 4-INCH TO 12-INCH DIAMETER F/D-157		
VV. 4-INCH TO 12-INCH DIAMETER F/D-158		
WW. 4-INCH TO 12-INCH DIAMETER F/D-159		
XX. 4-INCH TO 12-INCH DIAMETER F/D-160		



SHOULD A CONFLICT ARISE BETWEEN MANHARD DETAILS AND THE VILLAGE DETAILS, THE VILLAGE DETAILS SHALL TAKE PRECEDENCE.

GENERAL PLANTING SPECIFICATIONS:

PART 1 - GENERAL

1-01 DESCRIPTION:

- A. Provide trees, shrubs, perennials and groundcovers as shown and specified. This work includes:
 - 1. Spreading of topsoil or soil preparation
 - 2. Trees, shrubs, perennials and groundcovers
 - 3. Planting mixes
 - 4. Mulch and planting accessories
 - 5. Fertilizer and herbicide
 - 6. Maintenance
 - 7. Warranty of plant material
- B. The Contractor shall verify all existing conditions and dimensions in the field prior to bidding and report any discrepancies to the Owner or his/her representative.

1-02 QUALITY ASSURANCE:

- A. Comply with site work requirements
- B. Plant names indicated must comply with 'Standardized Plant Names' as adopted by the latest edition of the American Joint Committee of Horticultural Nomenclature. Names of varieties which are not listed should conform with those generally accepted by the nursery trade. Stock should be legibly tagged.
- C. All plant materials shall conform to the 'American Standards for Nursery Stock' (ASNS), latest edition, published by the American Association of Nurserymen, Washington, D.C.
- D. All plant material shall be grown and supplied within a 50 mile radius of the project for a minimum of two full growing seasons.
- E. Adhere to sizing requirements as listed in the plant list and/or bid form for the project. A plant shall be measured in its natural standing position.
- F. Stock that is furnished shall be at least the minimum size shown. With permission of the landscape architect, substitution from the specified plant list will be accepted only when satisfactory evidence in writing is submitted to the landscape architect, showing that the plant specified is not available. Requests for approval of substitute plant material shall include common and botanical names and size of substitute material. Only those substitutions of at least equivalent size and character to that of the specified material will be approved. Stock which is larger than that which is specified is acceptable with permission of the landscape architect, providing there is no additional cost and that the larger plant material will not be cut down in order to conform to the size indicated.
- G. All shrubs shall be dense in form. Shrub liners do not meet these specifications. Shrubs specified by height shall have a spread that is equal to the height measurement. Shrubs which are specified by spread shall exhibit the natural growth habit of the plant by having a greater spread than height.
- H. All plant materials are subject to inspection and approval. The landscape architect and Owner reserve the right to select and tag all plant material at the nursery prior to planting. The landscape architect and Owner reserve the right to inspect plant material for size and condition of root systems, the presence of insects and diseases, injuries and latent defects (due to Contractor negligence or otherwise), and to reject unacceptable plant material at any time during progress of the project.
- I. Container grown deciduous and/or evergreen shrubs will be acceptable in lieu of balled and burlapped shrubs subject to specified limitations for container grown stock. Size of container grown material must conform to size/height requirements of plant list.

1-03 DELIVERY, STORAGE & HANDLING:

- A. Fertilizer shall be delivered in original, unopened and undamaged packaging. Containers shall display weight, analysis and manufacturer's name. Store fertilizer in a manner that will prevent wetting and deterioration.
- B. Take all precautions customary concerning proper trade practice in preparing plants for transport. Plants shall be dug, packed and transported with care to ensure protection against injury. Inspection certificates required by law shall accompany each shipment invoice or order to stock and on arrival, the certificate shall be filed with the landscape architect. All plants must be protected from drying out. If plant material cannot be planted immediately upon delivery, said material should be properly protected in a manner that is acceptable to the landscape architect. Heeled-in plants must be watered daily. No plant shall be bound with rope or wire in a manner that could strip bark or break or shear branches.
- C. Plant material transported on open vehicles should be covered with a protective covering to prevent wind burn.
- D. Dry, loose topsoil shall be provided for planting bed mixes. Muddy or frozen topsoil is unacceptable as working with medium in this condition will destroy its structure, making root development more difficult.

1-04 PROJECT CONDITIONS:

- A. Notify landscape architect at least seven (7) working days prior to installation of plant material.
- B. It shall be the Contractor's responsibility to locate and protect all existing above and below ground utilities. Utilities can be located and marked (in Illinois) by calling J.U.L.I.E. at (800)892-0123.
- C. The Contractor shall provide, at his/her own expense, protection against trespassing and damage to seeded areas, planted areas, and other construction areas until the preliminary acceptance. The Contractor shall provide barricades, temporary fencing, signs, and written warning or policing as may be required to protect such areas. The Contractor shall not be responsible for any damage caused by the Owner after such warning has been issued.
- D. The Contractor shall be responsible for the protection of crowns, trunks and roots of existing trees, plus shrubs, lawns, paved areas and other landscaped areas that are to remain intact. Existing trees, which may be subject to construction damage, shall be boxed, fenced or otherwise protected before any work is started. The Owner desires to preserve those trees within and adjacent to the limits of construction except those specifically indicated to be removed on the Drawings. The contractor shall erect protective fencing and tree armor at locations indicated on the drawings and around all trees on site which are to be preserved. Protective fencing shall be erected between the limits of construction and any tree preservation areas shown on the Drawings.
- E. A complete list of plants including a schedule of sizes, quantities and other requirements is shown on the Drawings and on the bid form. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.

1-05 PRELIMINARY ACCEPTANCE:

- A. All plantings shall be maintained by the Contractor for a period of 90 days after preliminary acceptance by the Owner or his/her representative. Maintenance shall include, but is not limited to: mowing and edging turf, pulling weeds, watering turf and plant material and annual flower maintenance.

1-06 WARRANTY:

- A. All plant material (excluding annual color), shall be warranted for one (1) year after the end of the 90 day maintenance period. The end of the maintenance period is marked by the final acceptance of the Contractor's work by the Owner or his/her representative. Plant materials will be warranted against defects including death and unsatisfactory growth, except for defects resulting from abuse or damage by others, or unusual phenomena or incidents which are beyond the control of the Contractor. The warranty covers a maximum of one replacement per item.

PART 2 - PRODUCTS

2-01 PLANT MATERIALS:

- A. Plants: Provide typical of their species or variety, with normal, densely developed branches and vigorous, fibrous root systems. Only sound, healthy, vigorous plants which are free from sunscald injuries, disfiguring knots, frost cracks, abrasions of the bark, plant diseases, insect eggs, borers, and all forms of infestation shall be provided. All plants shall have a fully developed form without voids and open patches.
 - 1. Balled and burlapped plants shall have a firm natural ball of earth of sufficient diameter and depth to encompass a root system necessary for a full recovery of the plant. Root ball sizes shall comply with the latest edition of the 'American Standards for Nursery Stock' (ASNS). Root balls that are cracked or mushroomed are unacceptable.
 - 2. Container grown stock should be grown for an amount of time that is of sufficient length for the root system to have developed enough to hold its soil together, firm and whole. Plants will not be loose in their containers, nor shall they be pot-bound and all container grown stock will comply with the sizes stated on the plant list.
 - 3. No evidence of wounds or pruning cuts shall be allowed unless approved by the Landscape Architect.
 - 4. Evergreen trees shall be branched to the ground. The height of evergreen trees are determined by measuring from the ground to the first lateral branch closest to the top. Height and/or width of other trees are measured by the mass of the plant not the very tip of the branches.
 - 5. Shrubs and small plants shall meet the requirements for spread and/or height indicated in the plant list. The height measurement shall be taken from ground level to the average height of the top of the plant, not the longest branch. Single stem or thin plants will not be accepted. Side branches shall be flushed with growth and have good form to the ground. Plants shall be in a moist, vigorous condition, free from dead wood, bruises or other root or branch injuries.

2-02 ACCESSORIES:

- A. Topsoil:
 - 1. Topsoil shall be fertile, natural topsoil of a loamy character, without admixture of subsoil material. Topsoil shall be reasonably free from clay, lumps, coarse sand, stones, plants, roots, sticks and other foreign materials with a pH between 6.5 to 7.0.
- B. Topsoil for seed areas shall be a minimum of 6".
- C. Soil amendments shall be as follows:
 - 1. For trees and shrubs the plant pit will be backfilled with pulverized black dirt.
 - 2. For perennials and ornamental grasses the soil mixture will be as follows: CM-63 General Purpose Peat Based Mix as supplied by Midwest Trading. Top beds with 8" of CM-63 and till into existing beds to a depth of 8". Soil mixtures are available from Midwest Trading. Midwest Trading, St. Charles, IL 60174 (630) 365-1990
- D. Fertilizer:
 - 1. For trees and shrubs use: 14-4-6 briquettes 17 g or equivalent available from Arthur Clesen, Inc. Follow manufacturer's recommendation for application. Arthur Clesen, Inc. 543 Diens Drive, Wheeling, IL 60090 (847)537-2177
 - 2. For turf areas use 6-24-16 Clesen Fairway with micronutrients with minor elements 3.0 % S, .02% B, .05% Cu, 1.0% Fe, .0006% Mo, .10% Mn available from Arthur Clesen or approved equal.
- E. Herbicide:
 - 1. Round-Up or approved equal
- F. Mulch:
 - 1. Bark mulch shall be finely shredded hardwood bark which has been screened and is free of any green foliage, twigs, rocks, sawdust, wood shavings, growth or germination inhibiting ingredients, or other foreign materials. Bark mulch is available from Midwest Trading.
 - 2. Mushroom compost as available from Midwest Trading.
- G. Water:
 - 1. Water service will be available on the site, with the cost of water being paid by the Owner. Transporting of the water from the source to the work areas shall be the responsibility of the Landscape Contractor. All necessary hose, piping, tank truck, etc. shall be supplied by the Landscape Contractor.
- H. Guying:
 - 1. Stakes: 5/8" x 40" steel eye anchor with 4" helix
 - 2. Cable:
 - a. Trees under 5": flex ble 1/8" galvanized aircraft cable, 7x7 strand or approved equal
 - b. Trees 5" and over: flex ble 3/16" galvanized aircraft cable, 7x7 strand or approved equal.
 - 3. Turnbuckles: 5/16", eye and eye, with 4" take-up.
 - 4. Hose: new two-ply reinforced rubber hose, minimum 1/2" I.D.
- I. Tree wrap: Burlap tree wrap 4" wide.
- J. Twine: Soft nursery jute.

PART 3 - INSTALLATION OF PLANT MATERIAL

3-01 FIELD VERIFICATION:

- A. Examine proposed planting areas and conditions of installation. Do not start planting work until unsatisfactory conditions are corrected.

3-02 PREPARATION:

- A. All planting techniques and methods shall be consistent with the latest edition of 'Horticulture Standards of Nurseries, Inc.' and as detailed on these Drawings.
- B. Planting shall be performed by experienced workmen familiar with planting procedures under the supervision of a qualified supervisor.
- C. All underground utilities must be located and marked clearly.
- D. Apply Round-Up or approved equivalent to kill any existing vegetation in all areas to be planted. Confirm length of waiting period between chemical application and plant installation with manufacturer. Do not begin planting operations until prescr bed post-application waiting period has elapsed. Take extreme care to avoid chemical drift to adjoining properties of landscape plantings.

- E. Prior to all planting, rototill all areas to be landscaped to prepare for plant installation to a minimum depth of 12". Eliminate uneven areas and low spots. Maintain lines, levels, profiles and contour. Changes in grade are to be gradual. Blend slopes into level areas. Remove all debris, weeds and undesirable plants and their roots from areas to be planted. Remove all concrete slag larger than 2" in diameter.

- F. Topsoil shall be spread over the site at a minimum depth of 6". Those areas which are indicated as prairie or natural areas on the Drawings shall have a minimum topsoil depth of 18".

- G. It shall be the responsibility of the landscape contractor to prepare all seeded areas by disk and raking prior to planting seed. Soil shall be loosened and scarified to a minimum depth of 6". Fine grading of all seeded areas is required. Maximum size of stone or topsoil lump is 1".

- H. Locate all plant material as indicated or as approved in the field by the Landscape Architect. If obstructions are encountered which are not shown on the drawings, then do not proceed with planting operations until alternate plant locations have been selected.

- I. Planting holes shall be constructed as shown on the planting details. Holes shall be hand dug or machine dug. Great care will be taken to not excavate the hole deeper than the root ball and the diameter shall be a minimum of two times the root ball width. Remove any materials encountered in excavation that may be injurious to plant growth, including stones larger than 2" in diameter or other debris. Soil to be used as backfill should be pulverized.

- J. Provide pre-mixed planting mixture for use around root systems and root balls of the plants. The mixtures are outlined in section B of part 2-02.

- K. Prior to planting, provide additional topsoil to all planting beds to bring the finish grade of the bed to 2" above lawn grade and to finish grade of adjacent hard surface grades.

- L. Add 2" thickness of mushroom compost to all annual, perennial and groundcover beds. Finish grade bed and install plants.

3-03 PLANTING PROCEDURES:

- A. Set plant material in the planting hole to proper grade and alignment. Set plants upright and plumb. Set plant material 2" above the adjacent finish grade. Remove burlap from top 1/3 of root ball. Remove treated burlap (green). Cut and remove or cut and fold down upper half of wire basket, dependent upon tree size. Backfill hole by firmly tamping soil to avoid any air pockets or voids.

- B. Set balled and burlapped plants in the planting hole and compact 8" of soil around the base of the ball. Backfill remaining space with planting mixture. Water plants immediately after planting to eliminate all voids and thoroughly soak the plant root ball.

- C. Space groundcover plants according to dimensions given on the plans. Adjust spacing as necessary to evenly fill planting bed with indicated number of plants. Plant to within 18" of the trunks of trees and shrubs or at the edge of the plant ball, whichever is closest. Plant to within 12" of edge of bed.

- D. Mulching:
 - 1. Install 4" depth of mulch around all tree and shrub beds as indicated on drawings or planting details. Mulch shrub planting areas as continuous beds. Do not place mulch directly against tree trunk; form mulch to create an inverted cone around trunk.
 - 2. Mulch perennial, groundcover and annual planting beds with 2" mushroom compost. Water mulched areas thoroughly after placing mulch.

- E. Tree wrapping is not required, unless the Contractor feels it is necessary due to characteristics of a particular species or past experience with the species. The landscape architect will be notified as to which trees are to be wrapped and shall inspect the trunk(s) before wrapping. Tree wrap will not be used to cover damage or defects. When wrapping is done, trunks will be wrapped spirally with approved tree wrapping tape that is not less than 4" wide, and securely tied with suitable cord at the top, bottom and 2" intervals along the trunk. Wrap from ground to the height of the first branch.

- F. Staking and guying of trees is optional. If the Contractor chooses to stake all or part of the trees, he/she shall use the method specified in the planting details. One (1) stake is to be used on trees of 1" caliper and under, or 4" height and under. Two (2) stakes are to be used on trees of 1" to 2 3/4" caliper. Guy trees of 3" caliper or larger at three (3) per tree. The root ball will not be pierced with a stake. Stakes are to be driven at least eighteen (18) inches into subsoil below the planting hole. Stakes and wire attachments shall be removed after three months for spring planted material and by the following May for fall planted stock by the Contractor. Staking and guying should be done immediately after lawn seeding or sodding operations.

- G. Seeding of specified lawn areas on plans will be treated as follows:
 - 1. Topsoil shall be spread over all areas to be seeded to a minimum depth of 6" when compacted (to be performed by others).

- 2. Seed mixture and application rate - use Premium seed mix as supplied by Arthur Clesen, Inc. Apply at a rate of 5 lbs./1000 s.f.

- 3. Apply fertilizers and conditioners at the rate specified per soil test findings. In lieu of soil test results, apply two (2) tons of ground agricultural limestone and 1000 lbs. 10-10-10 or equivalent analysis fertilizer per acre. At least 40% of the fertilizer nitrogen shall be of an organic origin.

- 4. Soil preparation areas where vehicular traffic has compacted the soil shall be loosened/scarified to a minimum depth of 6" before fertilizing and seeding. Fine grading of all seeded areas is required. Maximum size of stone or topsoil lump is 1".

- 5. Watering seeded areas shall be done to ensure proper germination. Once seeds have germinated, watering may be decreased but the seedlings must never be allowed to dry out completely. Frequent watering should be continued approximately four (4) weeks after germination or until grass has become sufficiently established to warrant watering on an 'as needed' basis.

- 6. Turf is being established on a variety of slope conditions. It shall be the Contractor's responsibility to determine and implement whatever procedures he/she deems necessary to establish the turf as part of his/her work. Seeded areas will be accepted when all areas show a uniform stand of the specified grass in healthy condition and at least 90 days have elapsed since the completion of this work. The Contractor shall submit with his/her bid a description of the methods and procedures he/she intends to use.

- H. Erosion Control Blanket
 - 1. Erosion Control Blanket shall be installed per manufacturer's recommendation in all areas shown on the plan.

- 2. Install S-75 Erosion Control Blanket as manufactured by North American Green or approved equal.

- 3. Blanket should be premarked with staple pattern.

- 4. Staples should be 8" wire staples, applied at two (2) per square yard minimum.

- 5. Suitable erosion control practices shall be maintained by the CONTRACTOR in accordance with Illinois Urban Manual and all applicable Soil Erosion and Sedimentation Control ordinances and the PLANS.

- I. Sodding of specified lawn areas on plans will be completed as follows:

- 1. Rake soil surface to receive sod to completely remove any soil crust no more than one day prior to laying sod.

- 2. Moisten prepared surface immediately prior to laying sod. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.

- 3. Sod shall be laid within 24 hours from the time of stripping. Do not plant dormant sod if the ground is frozen.

- 4. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Work sifted soil into minor cracks between pieces of sod; remove excess to avoid smothering of adjacent sod.

- 5. Place top elevation of sod 1/2 inch below adjoining edging or paving.

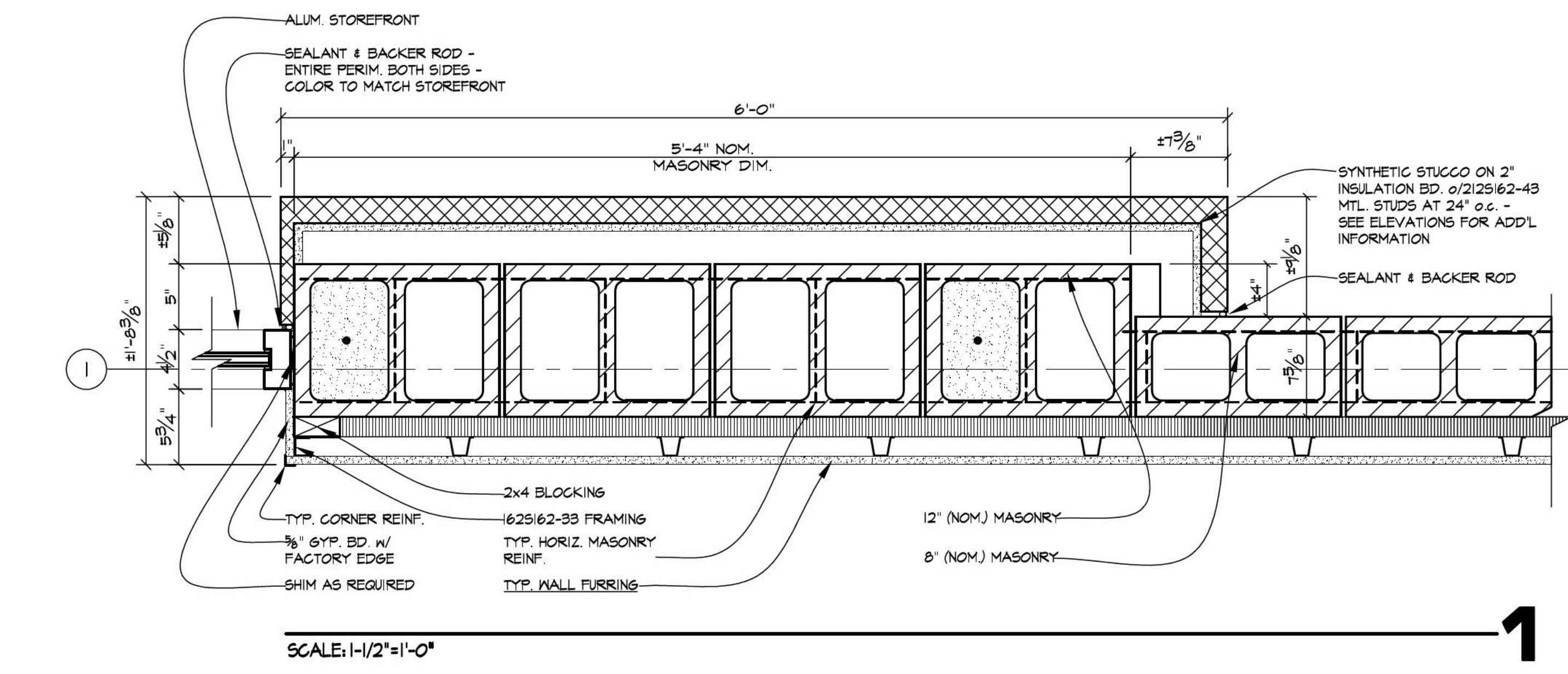
- 6. Water sod thoroughly with a fine spray immediately after planting.

- 7. After sod and soil have dried, roll seeded areas to ensure a good bond between the sod and soil, and to remove minor depressions and irregularities.

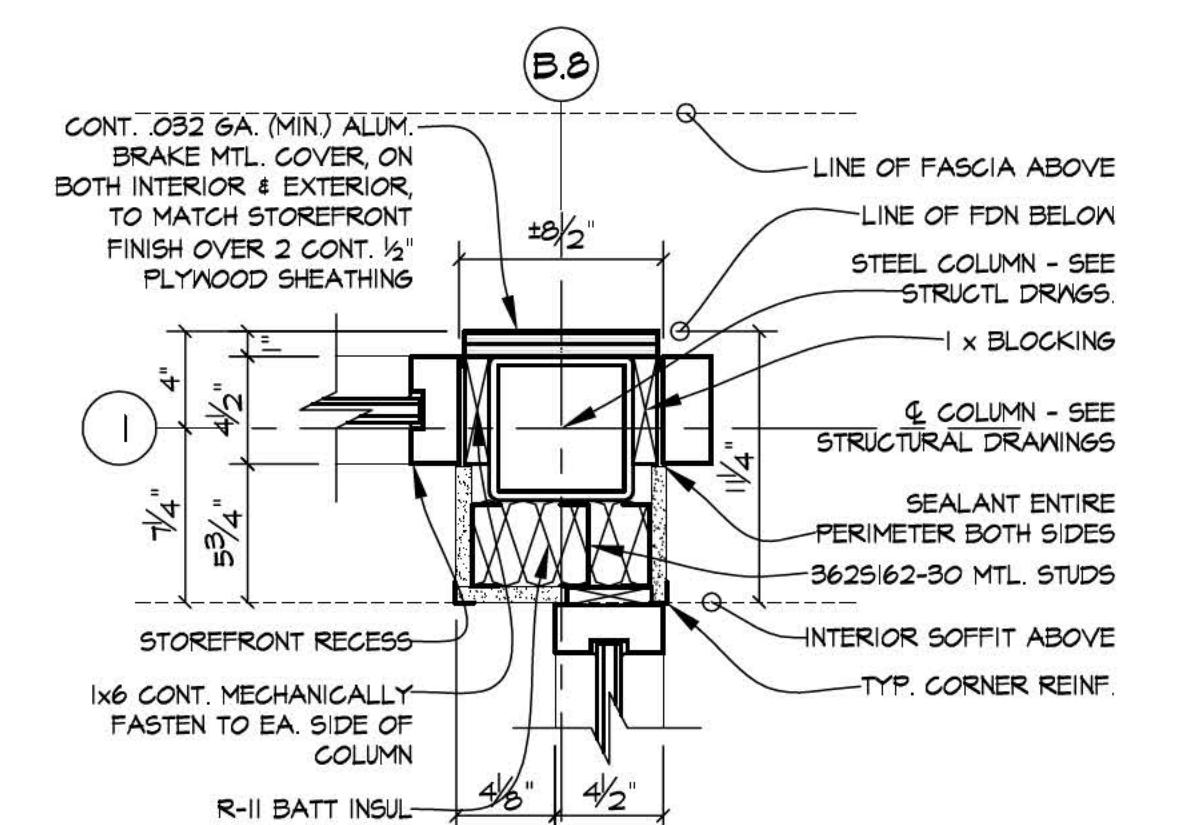
- 8. Sodded slopes 3:1 or greater shall be staked to prevent erosion and washout.

- 9. Warranty sodding for a period of one (1) year from the end of the 90 day maintenance period. If sod fails or lacks vigor and full growth as determined by the Landscape Architect, the Contractor will repeat site preparation operations and re-sod affected areas at the Contractor's expense.

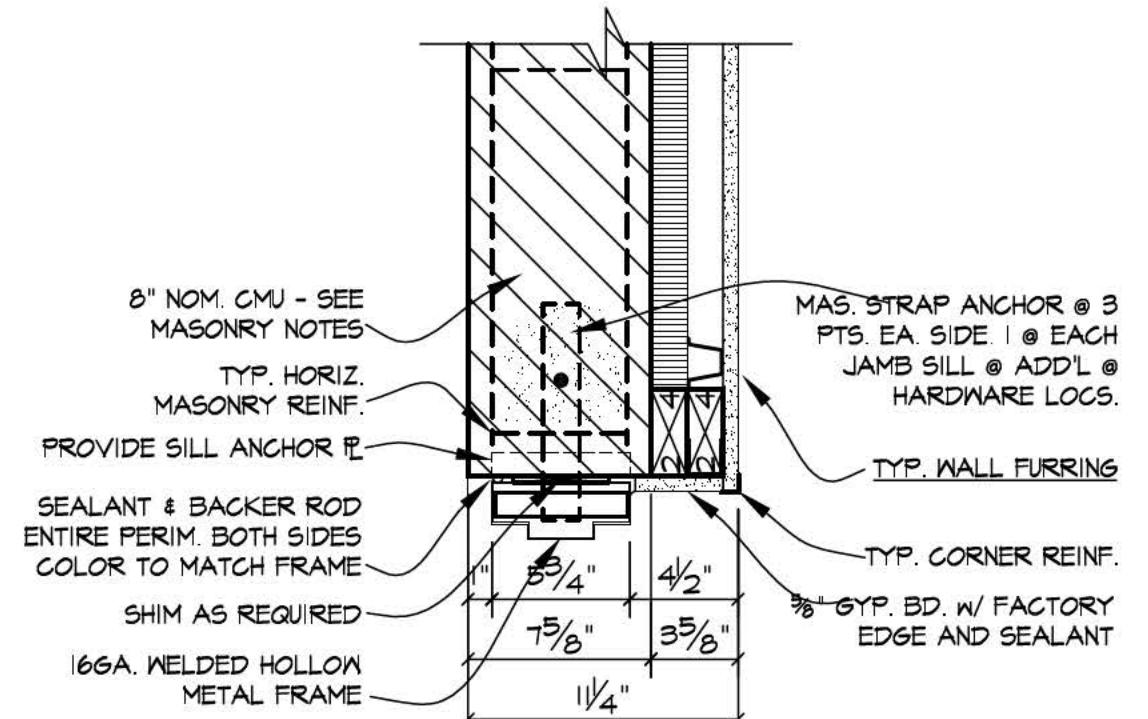
- 10. Note: Sod shall be a premium Kentucky Bluegrass blend, and is required in all areas indicated on the plans as well as areas which have been affected by construction. Sod can be placed as long as water is available and the ground surface can be properly prepared. Sod shall not be laid on frozen or snow-covered ground. Sod shall be strongly rooted, not



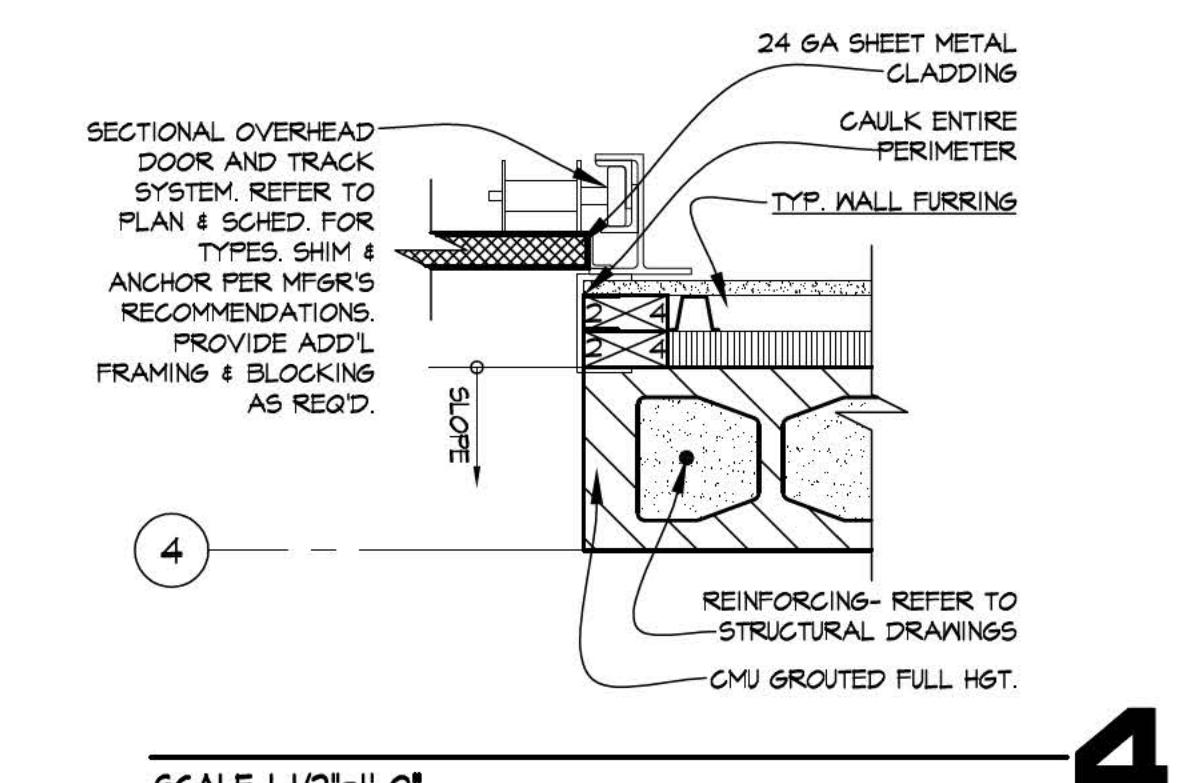
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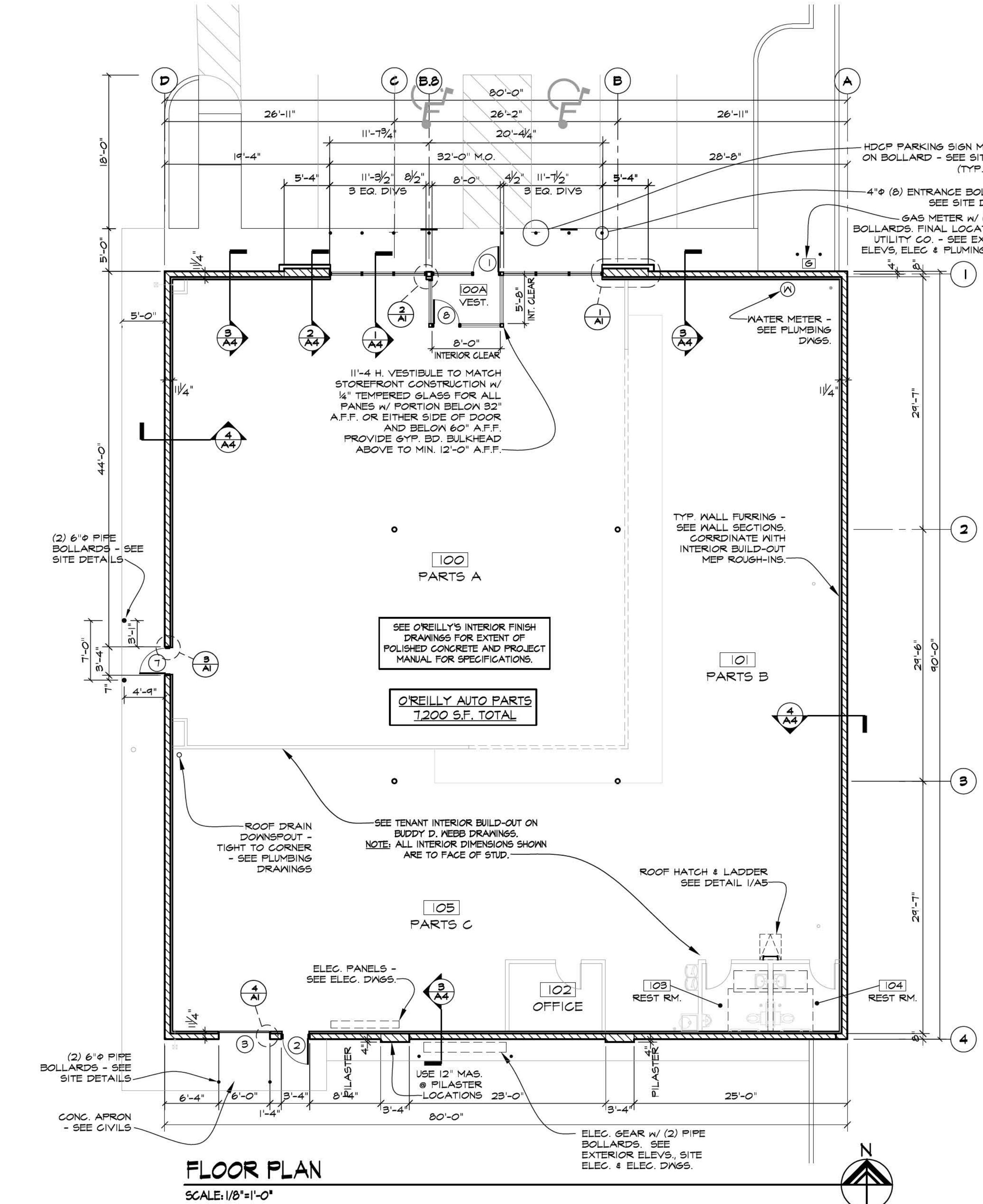
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SCALE: 1-1/2"=1'-0"



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



FLOOR PLAN

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

NOTES:
1. INTERIOR BUILD-OUT LAYOUT FOR TENANT (N.I.C.) IS SHOWN FOR INFORMATION PURPOSES ONLY.

2. SEE STRUCTURAL DRAWINGS FOR COLUMN SIZE
3. SEE ELEVATIONS FOR CONTROL JOINT LOCATIONS AND ADDITIONAL REQUIREMENTS
4. PROVIDE PORTABLE FIRE EXTINGUISHERS TO BE PROVIDED BY TENANT. QUANTITY AND LOCATION AS REQUIRED BY LOCAL FIRE DEPARTMENT; IFC & NFPA 10
5. PROVIDE KNOX KEY LOCK BOX FOR FIRE DEPT. ACCESS AS REQUIRED BY LOCAL FIRE DEPARTMENT.

MASONRY NOTES:

1. STANDARDS: COMPLY WITH RECOMMENDATIONS OF BRICK INSTITUTE OF AMERICA (BIA), AND NATIONAL CONCRETE MASONRY ASSOC. (NCMA) AND THE REQUIREMENTS OF THE CURRENT BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 5) AND SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530/ASCE 6).

ALL MASONRY TO HAVE INTEGRAL POLYMER WATER REPELLENT BY MANUFACTURER. PROVIDE POLYMER WATER REPELLENT ADMIXTURE ADDED TO THE MORTAR BY THE MASONRY CONTRACTOR, PER MANUFACTURER'S SPECIFICATIONS.

2. CONCRETE MASONRY UNITS (CMU): ASTM C 90, GRADE N-1. PROVIDE "MEDIUM WEIGHT" UNITS (MIN. 105 PCF) WITH A MINIMUM COMPRESSIVE STRENGTH, FM = 2000 PSI.

SELECTION: ELSION SPLIT & SMOOTH FACE. DISTRIBUTOR: RAMM BRICK & SUPPLY LLC. CONTACT: KIP RAMM - CELL (847)871-7183.

SIZES & TEXTURE:
A) 7/8" H. x 7/8" D. x 15/8" L. (NOM. 8 x 12 x 16 @ PILASTERS) SPLIT-FACE FINISH
B) 7/8" H. x 7/8" D. x 15/8" L. @ BEHIND EIFS, SMOOTH-FACE FINISH
C) MISC. SIZES AS REQ'D. SEE WALL SECTIONS, EXTERIOR DETAILS & EXTERIOR FINISH LIST.

3. FINISH: PAINTED PER EXTERIOR FINISH SCHEDULE.

4. MASONRY MORTAR: ASTM C 270, TYPE S, APPROXIMATELY 3:1:1 PORTLAND CEMENT/LIME, SAND FOR EXTERIOR, MORTAR 2:1:0.5, NATURAL INTEGRAL POLYMER WATER REPELLENT ADMIXTURE (COMPATIBLE w/ MASONRY) ADDED TO THE MORTAR BY THE MASONRY CONTRACTOR, PER MANUFACTURER'S SPECIFICATIONS.

5. PORTLAND CEMENT: ASTM C 150, TYPE I, NON-STAINING, NO AIR ENTRAINMENT, WHITE IF NEEDED FOR COLOR MATCH.

6. LIME: HYDRATED LIME, ASTM C 207, TYPE S.

7. SAND: ASTM C 144, OR FINER IF NEED FOR JOINT SIZES LESS THAN 1/4".

8. INSTALL (LAY) THRU-WALL BRICK UNITS IN 1/2 RUNNING BOND PATTERN @ CMU IN RUNNING BOND PATTERN.

9. CUT EXPOSED MASONRY UNITS, WHERE NECESSARY, WITH A POWER SAW. AVOID THE USE (BY PROPER LAYOUT) OF LESS-THAN-HALF-SIZE UNITS.

10. HOLD UNIFORM JOINT SIZES AS INDICATED, OR IF NOT INDICATED, HOLD JOINT SIZES TO SUIT MODULAR SIZE OF MASONRY UNITS.

11. CUT JOINTS FLUSH AND TOOL SLIGHTLY CONCAVE, UNLESS OTHERWISE INDICATED.

12. REINFORCE HORIZONTAL JOINTS WITH CONTINUOUS MASONRY WIRE REINFORCING SPACED 16" VERTICALLY, EXCEPT SPACED 8" IN PARAPET WALLS AND IMMEDIATELY ABOVE AND BELOW OPENINGS, FOR A DISTANCE OF 2 FEET BEYOND THE OPENING IN ALL FOUR DIRECTIONS. DO NOT BRIDGE CONTROL AND EXPANSION JOINTS IN THE WALL SYSTEM.

13. COMPLETELY FILL WITH MORTAR COLLAR JOINTS IN MULTI-WYTHE MASONRY WALLS, EXCEPT WHERE FLASHING AND/OR WEEPS ARE PRESENT.

14. FILL HEAD (VERTICAL) JOINTS WITH MORTAR @ INTERIOR AND EXTERIOR FACES ONLY IN ALL MASONRY WORK, EXCEPT WHERE FLASHING AND/OR WEEPS ARE PRESENT..

15. WHERE INDICATED, COMPLETELY FILL CORES OF MASONRY UNITS FOR FULL HEIGHT OF THE WALL WITH THE TYPE S MORTAR OR CONCRETE - SEE MASONRY REINFORCING NOTES.

16. PROVIDE CONTROL AND EXPANSION JOINTS AT LOCATIONS SHOWN, AND KEEP CLEAN OF MORTAR DROPPINGS/ SQUEEZE - OUT.

17. IF LOCATIONS ARE NOT SHOWN, SPACE CONTROL JOINTS 25'-0" (HORIZONTALLY) FOR CMU MASONRY.

18. THE CONTRACTOR SHALL BRACE WALLS ADEQUATELY DURING CONSTRUCTION UNTIL THE ROOF AND FLOOR STRUCTURE ARE IN PLACE.

19. THE WORK IN PROGRESS WILL BE INSPECTED BY THE OWNER'S REPRESENTATIVE IN ACCORDANCE WITH SECTION 15 OF ACI 530..

20. JOIST BEARINGS - USE A MINIMUM OF 3 CONCRETE BLOCK BRICK COURSES OR FILL ONE COURSE OF CONCRETE BLOCK SOLID WITH GROUT UNDER EACH JOIST.

21. BEAM BEARING - USE SOLID CONCRETE BLOCK 2 COURSES WIDE BY 3 COURSES DEEP UNDER EACH BEAM.

22. PILASTERS - FILL SOLID WITH GROUT (SEE BEAM BEARING NOTE # 21).

23. N/A

24. MASON IS RESPONSIBLE FOR KEEPING FLASHING/WEPP SYSTEM FUNCTIONING AND FREE OF MORTAR.

25. PROVIDE CONTROL JOINTS AT MAXIMUM 25'-0" O.C.

26. PRE-CONSTRUCTION MEETING REQUIRED PRIOR TO INSTALLATION OF THRU-WALL BRICK SYSTEM. PRE-CONSTRUCTION MEETING TO INCLUDE MANUFACTURER, MANUFACTURER'S REPRESENTATIVE, OWNER'S REPRESENTATIVE & ARCHITECT.

27. PROVIDE INTEGRAL POLYMER WATER REPELLENT RECOMMENDED BY MANUFACTURER. PROVIDE POLYMER WATER REPELLENT ADMIXTURE ADDED TO THE MORTAR BY THE MASONRY CONTRACTOR, PER MANUFACTURER'S SPECIFICATIONS.

28. CLEANING: DO NOT USE ACID WASH OR HARSH DETERGENT. MASONRY WALLS ARE TO BE CLEANED SEVEN DAYS AFTER COMPLETION WITH A MILD DETERGENT SOLUTION OR OTHER PROPRIETARY SOLUTION AS RECOMMENDED BY MASONRY MANUFACTURER, OR USE PROSOCO "LIGHT DUTY Concrete Cleaner". WALLS SHOULD BE THOROUGHLY SATURATED WITH CLEAR WATER BEFORE AND AFTER CLEANING SOLUTION IS APPLIED.

29. N/A

30. FLASHING: "BLOCKFLASH" BY MORTAR NET SOLUTIONS, AS SHOWN ON DRAWINGS. SEE BLOCKFLASH INSTALLATION NOTES. IN ADDITION, FLEXIBLE MEMBRANE FLASHING WITH END DAMS TO ALSO BE USED AND FULLY ADHERED TO ALL STEEL LINTELS.

MASONRY REINFORCING NOTES:

1. PROVIDE REINFORCED UNIT MASONRY WITH RUNNING BOND.

2. REINFORCED CONCRETE UNIT SYSTEM SHALL CONSIST OF THE FOLLOWING:

A. MEDIUM WEIGHT HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS COMPLYING WITH ASTM C90, GRADE N TYPE I.
B. REINFORCING BARS SHALL BE ASTM A615-60 AND SHALL HAVE DEFORMATIONS IN ACCORDANCE TO ASTM SPECIFICATION A805.
C. THE STARTAR WITH A MINIMUM COMPRESSIVE UNIT STRESS FOR THE MASONRY ASSEMBLY, FM = 2000 PSI.
D. GROUT SHALL BE GROUT CONFORMING TO ASTM C476 WITH A MINIMUM COMPRESSIVE ASSEMBLY, FM = 2000 PSI. STRENGTH OF 2000 PSI.

3. THE REINFORCED CONCRETE MASONRY UNITS SHALL BE ERECTED USING THE LOW LIFT METHOD.

4. PROVIDE ONE NUMBER FOUR (4) BAR MINIMUM AROUND ALL DOOR OPENINGS.

5. VERTICAL REINFORCING BARS SHALL BE AS SHOWN ON DRAWINGS WITH LADDER TYPE HORIZONTAL REINFORCING WITH FOUR(4) NO. 9 GAGE BARS AT 16" ON CENTER, U.N.O.

6. REINFORCING STEEL SHALL BE LAPPED 16 BAR DIAMETERS OR 24 INCHES, WHICHEVER IS GREATER, WHERE SPLINED, AND SHALL BE SEPARATED BY ONE BAR DIAMETER OR WIRED TOGETHER.

7. VERTICAL BARS SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 DIAMETERS OF REINFORCEMENT.

8. VERTICAL REINFORCING STEEL SHALL HAVE A CLEARANCE OF THREE QUARTERS OF AN INCH FROM MASONRY OR ADJACENT BARS, BUT NOT LESS THAN ONE BAR DIAMETER BETWEEN BARS.

9. ALL REINFORCING SHOWN ON DRAWINGS SHALL BE GROUTED FULL LENGTH.

10. ALL GROUT SHALL BE PUDDLED OR VIBRATED IN PLACE.

11. VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENT TO MAINTAIN A CONTINUOUS UNOBSTRUCTED CELL AREA NOT LESS THAN 2" X 3".

12. CELLS CONTAINING REINFORCEMENT SHALL BE SOLIDLY FILLED WITH GROUT AND POURS SHALL BE STOPPED ONE AND ONE HALF INCHES BELOW THE TOP OF A COURSE TO FORM A KEY AT FOUR JOINTS.

13. ALL BOLTS, ANCHORS, ETC. INSERTED IN THE WALL SHALL BE SOLIDLY GROUTED IN PLACE.

THRU-WALL MASONRY NOTES:

1. **MOCK-UP:** CONSTRUCT A MASONRY WALL PANEL AT LEAST

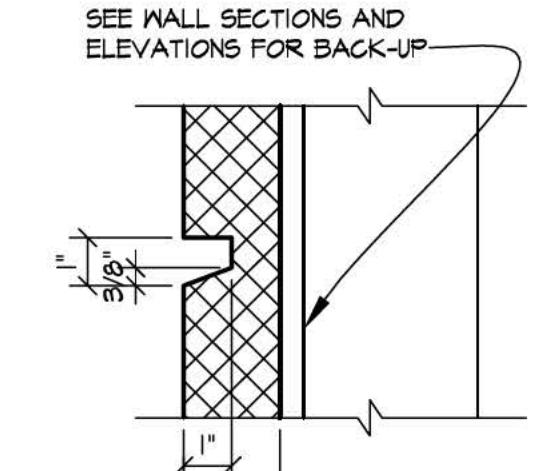
4 FEET LONG BY 4 FEET HIGH TO REPRESENT THE EXTERIOR MASONRY WALL (INCLUDING ACCENT BANDS). INCLUDE

REINFORCING AND MINIMUM ONE CONTROL JOINT AND ONE OUTSIDE CORNER. INCLUDE JOINT PROFILE AND MORTAR COLOR.

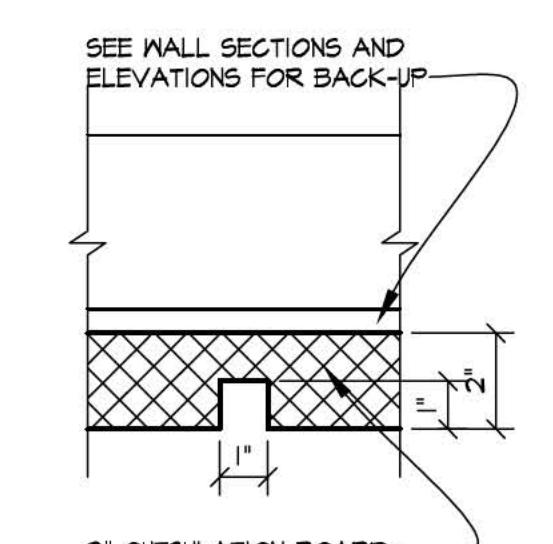
CLEAN ONE-HALF OF MOCK-UP TO REPRESENT FINAL CLEAN DOWNSIZING METRICS AND MATERIALS IN ACCORDANCE WITH CLEANING REQUIREMENTS HEREIN AND LEAVE REMAINDER

WITHOUT FINAL CLEANING FOR COMPARISON. MOCK-UP TO BE APPROVED BY ARCHITECT/OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH MASONRY INSTALLATION. PROVIDE ON-SITE INSPECTION BY MASONRY MANUFACTURER REPRESENTATIVE OF MOCK-UP CONSTRUCTION AND CLEANING AND SUBMIT MANUFACTURER'S LETTER OF APPROVAL OF THE WORK PROCEDURES AND THE COMPLETED MOCK-UP.

2. PRE-CONSTRUCTION MEETING REQUIRED PRIOR TO INSTALLATION OF THRU-WALL BRICK SYSTEM. PRE-CONSTRUCTION MEETING TO INCLUDE MANUFACTURER, MANUFACTURER'S REPRESENTATIVE, OWNER'S REPRESENTATIVE & ARCHITECT.



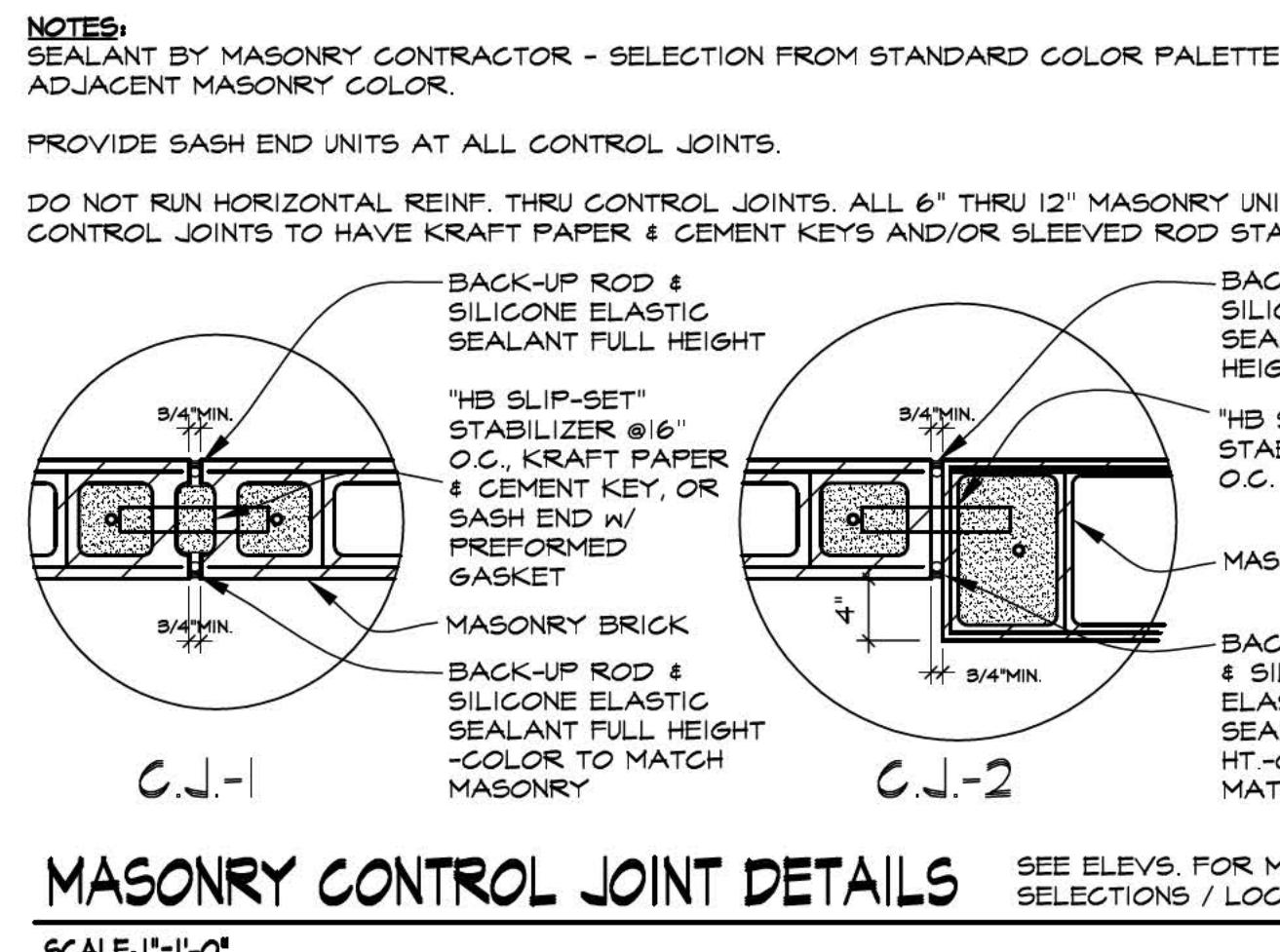
HORIZONTAL



VERTICAL

E.I.F.S. SCORE JOINT DETAILS

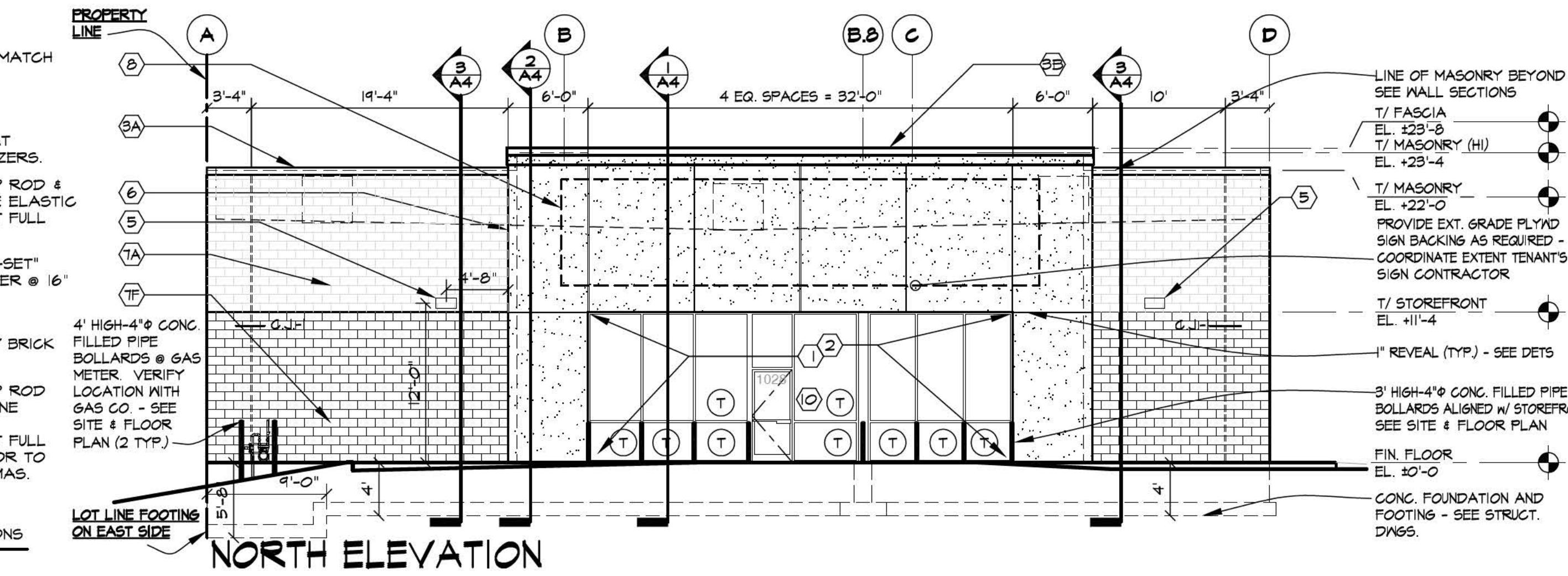
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MASONRY CONTROL JOINT DETAILS

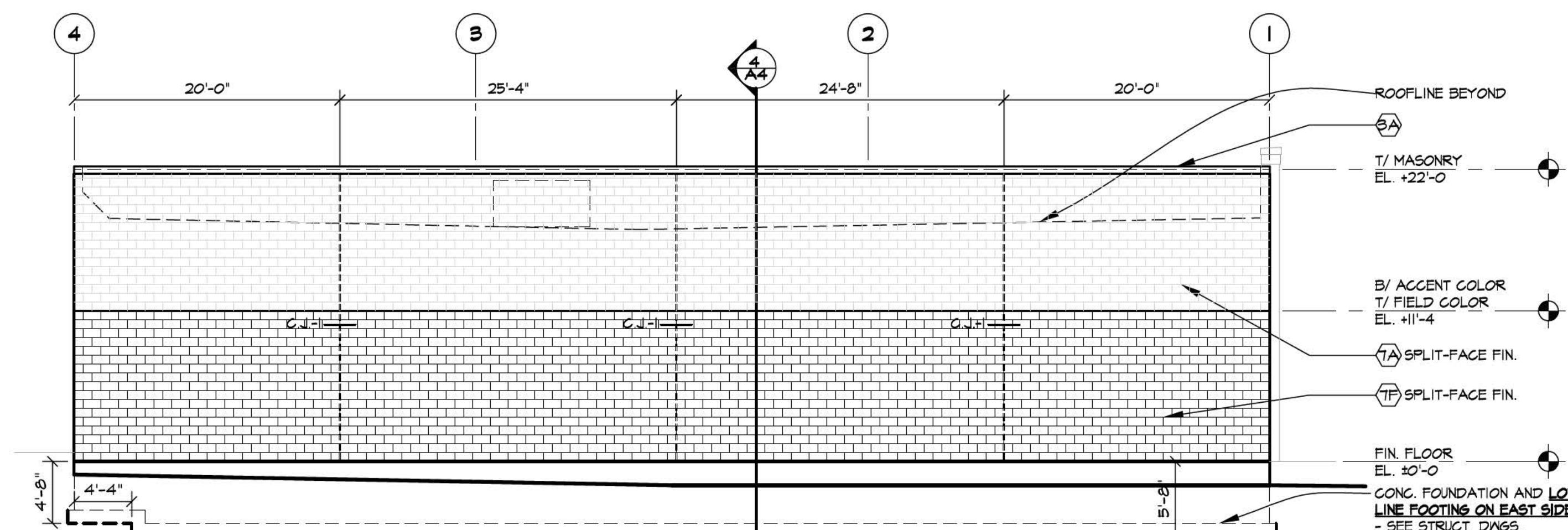
SEE ELEVS. FOR MAS. SELECTIONS / LOCATIONS

SCALE: 1"-1'-0"



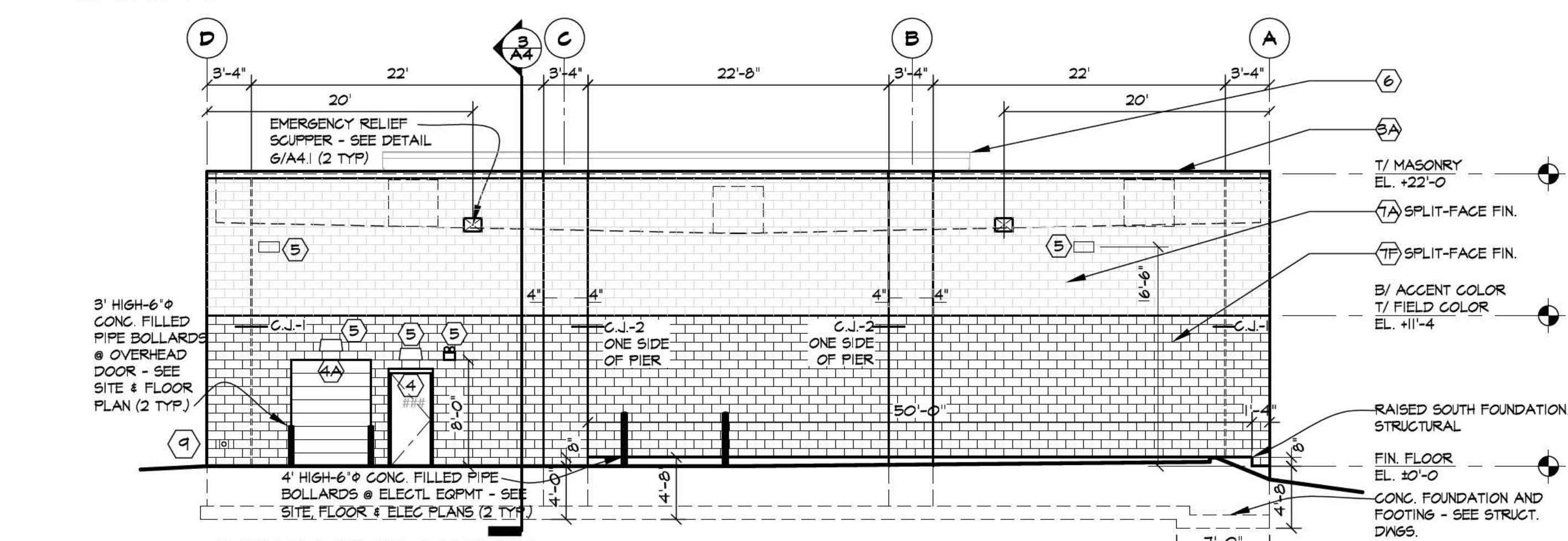
NORTH ELEVATION

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



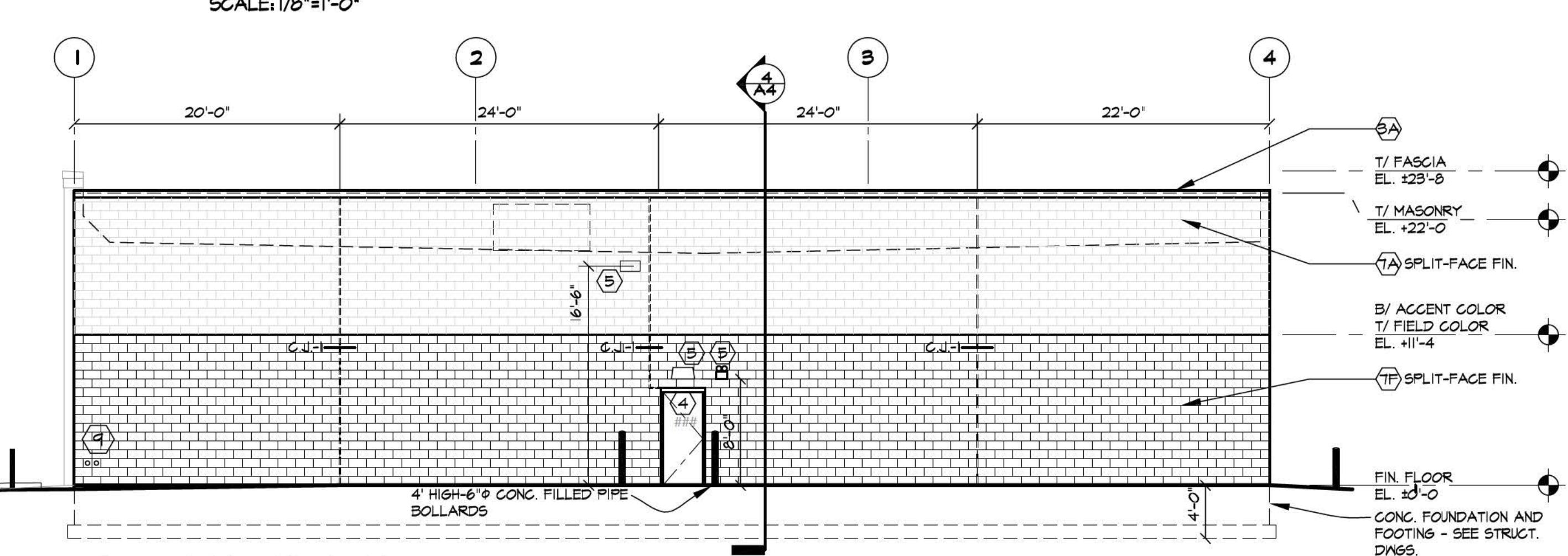
EAST ELEVATION

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



SOUTH ELEVATION

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



WEST ELEVATION

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

T-H DRAWING	
NOT FOR COORDINATION	1/12/19
FOR BIDDING	1/12/19
NOT FOR PERMITTING	1/12/19
NOT FOR CONTRACTING	1/12/19
NOT FOR CONSTRUCTION	1/12/19

KMA & ASSOCIATES, INC. ARCHITECTS	
SUIT F	60015-2235

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(847)945-6669

FAX (847)945-6669

O'REILLY AUTO PARTS
DOLTON PLAZA
1317 E. SIBLEY BLVD.
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE
ELEVATION
NOTES
DETAILS

1906

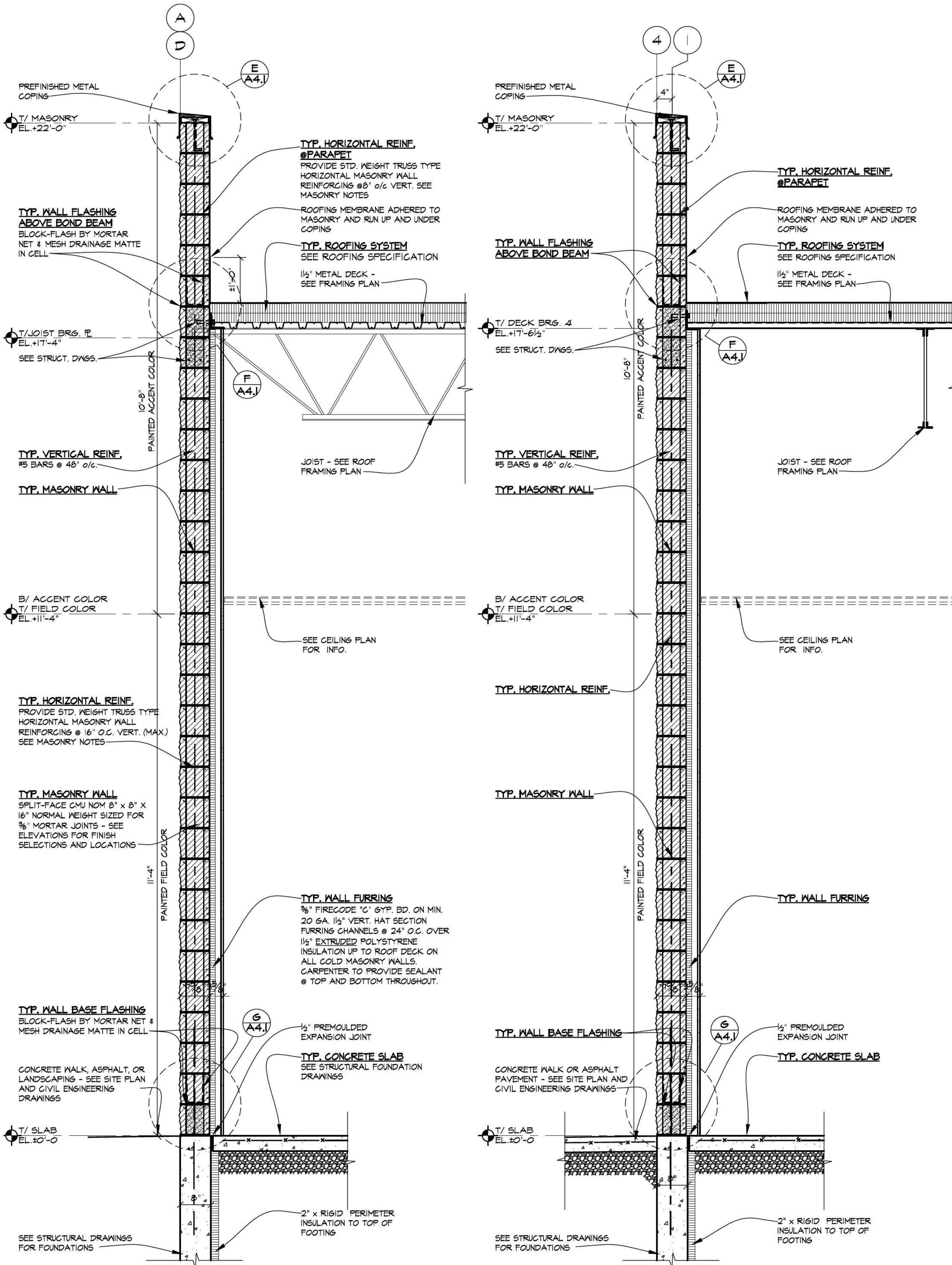
SPECIAL MASONRY NOTE ALERT!
There are four CRITICAL elements to SINGLE WYTHE masonry construction:
1. The concrete brick product has to have integral waterproofing.
2. The mortar has to have a water repellent.
3. All flashing, including the "BlockFlash" flashing system, has to be employed correctly.
4. The building has to be sealed with a protective sealer treatment.

See masonry notes for more information regarding these and other specification items.

NOTE:
-PROVIDE BLOCKFLASH NEAR BASE OF WALL & ABOVE ALL LINTELS, STEEL BEAMS, SOLID CORES, BOND BEAMS AND ABOVE ANY MULTI-WYTHE CONDITION.
-EXTERIOR WALL DEPRESSIONS TO BE FILLED w/ CONCRETE TO ELEV. #0-0". IT IS THE CONCRETE CONTRACTOR'S RESPONSIBILITY TO REMOVE ANY MASONRY SHIMS USED TO TEMPORARILY FILL PIER DEPRESSIONS.

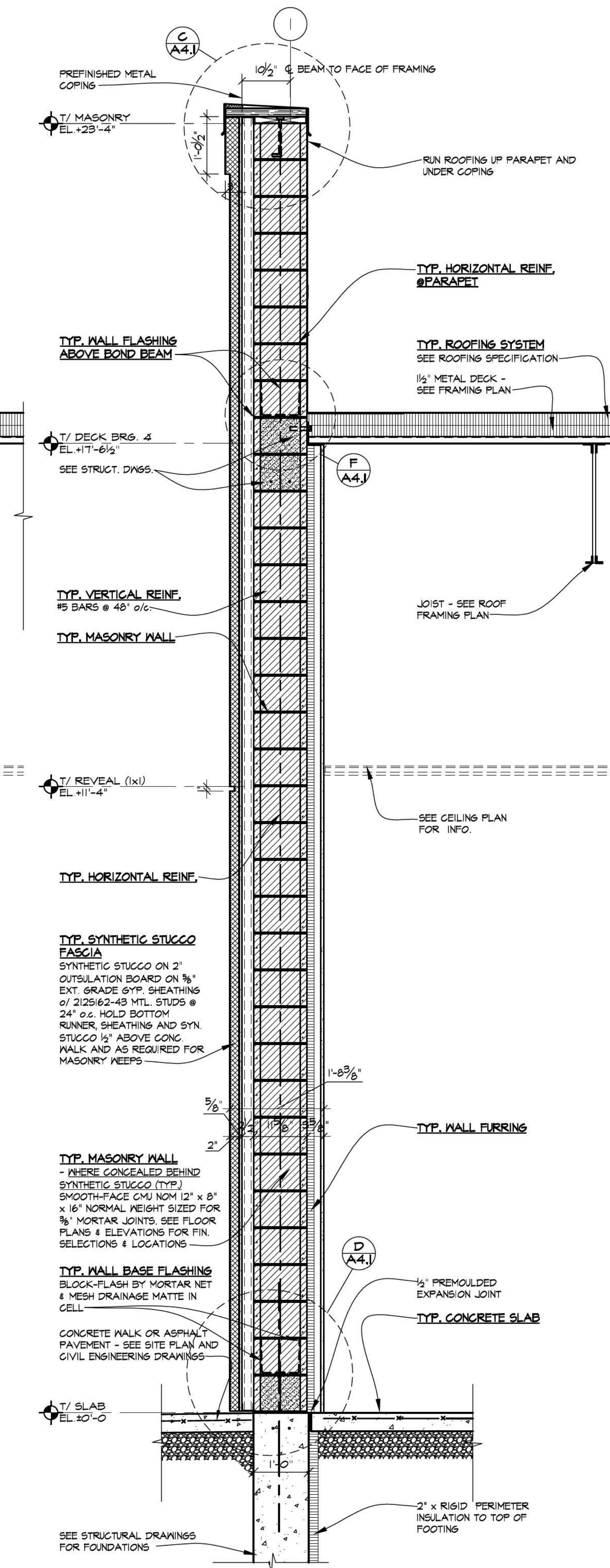
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VERIFY JOIST ORIENTATION W/ ROOF FRAMING PLAN AND DETAILS

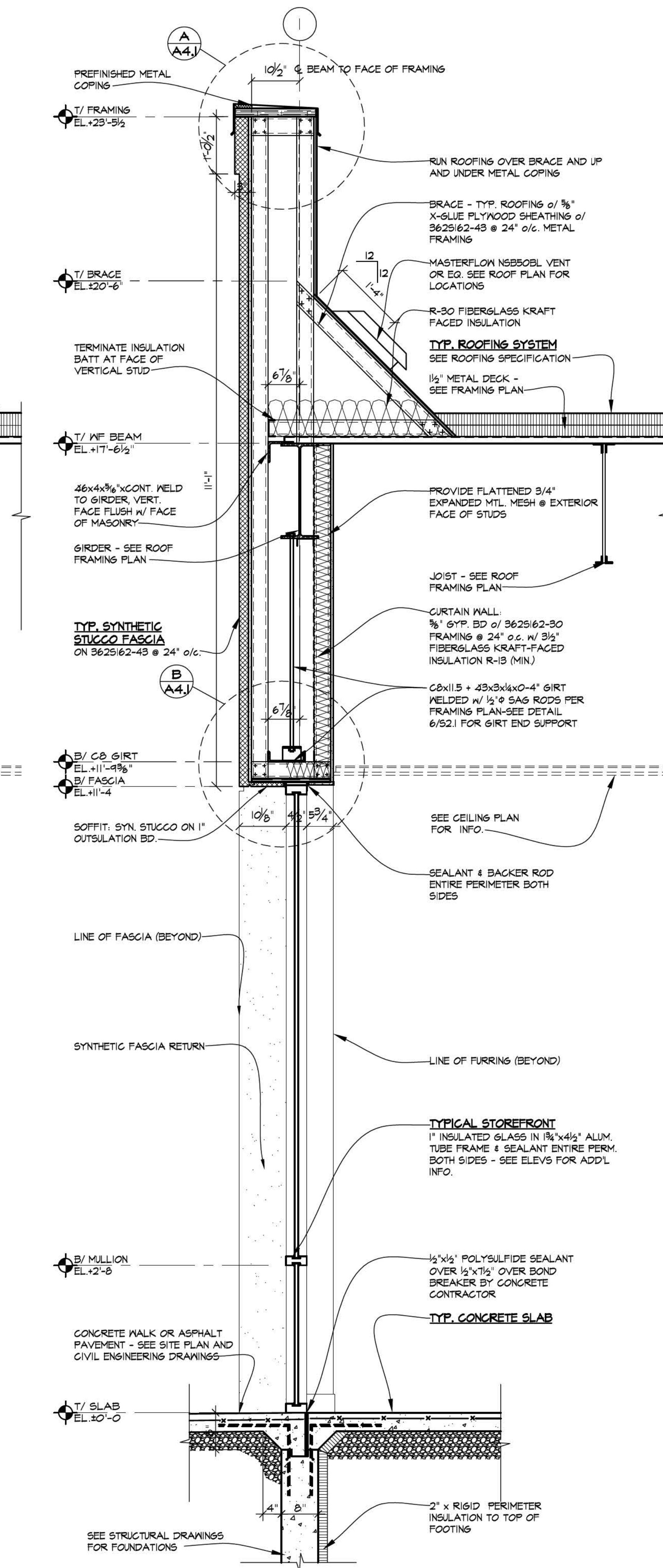


SCALE: 3/4" = 1'-0" SEE 4/A4 FOR ADD'L TYP. NOTES

3



SCALE: 3/4" = 1'-0" SEE 4/A4 FOR ADD'L TYP. NOTES



1

O'REILLY AUTO PARTS
DOLTON PLAZA
1317 E. SIBLEY BLVD., DOLTON, IL 60419
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE
WALL SECTION

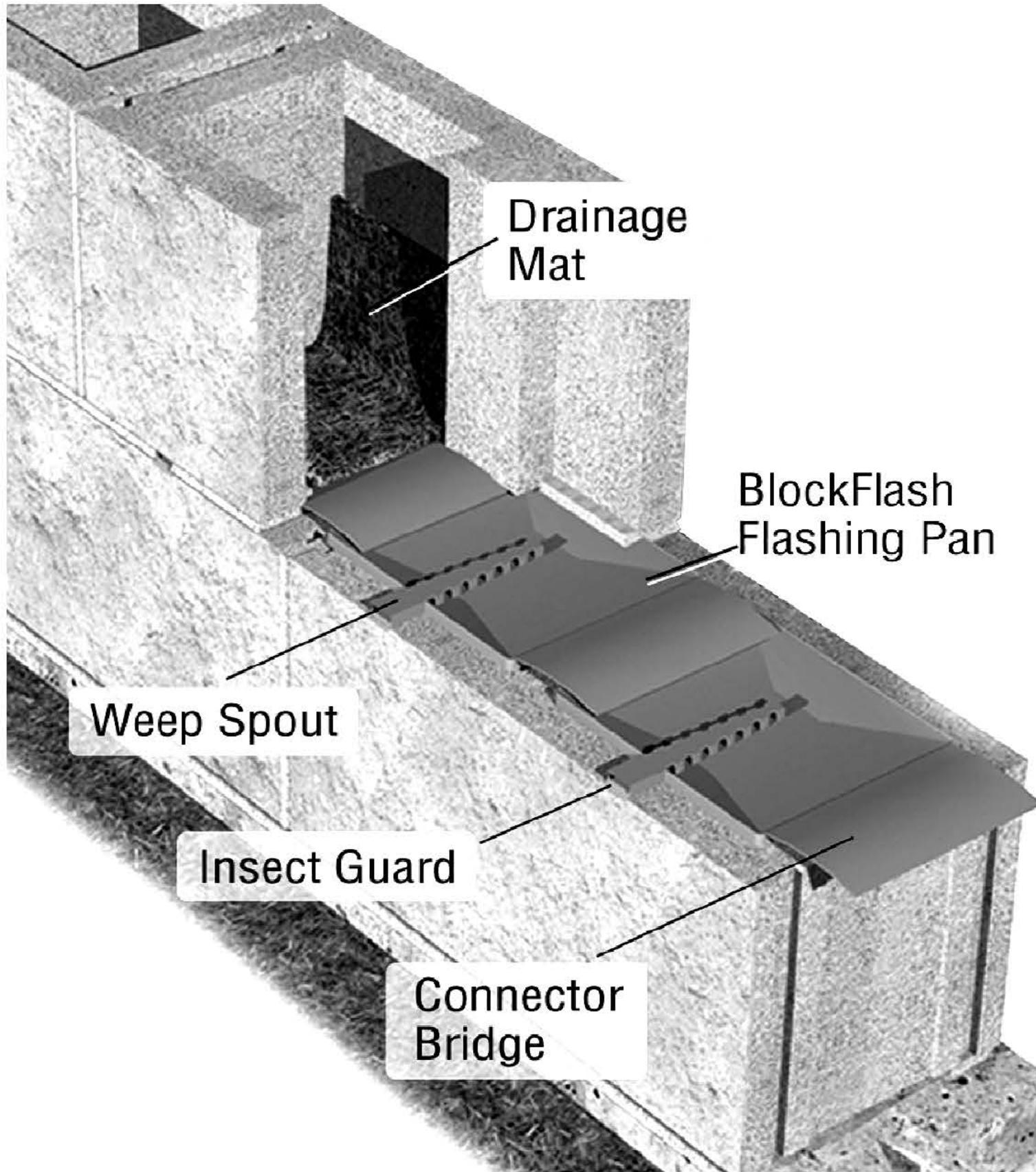
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REVISIONS

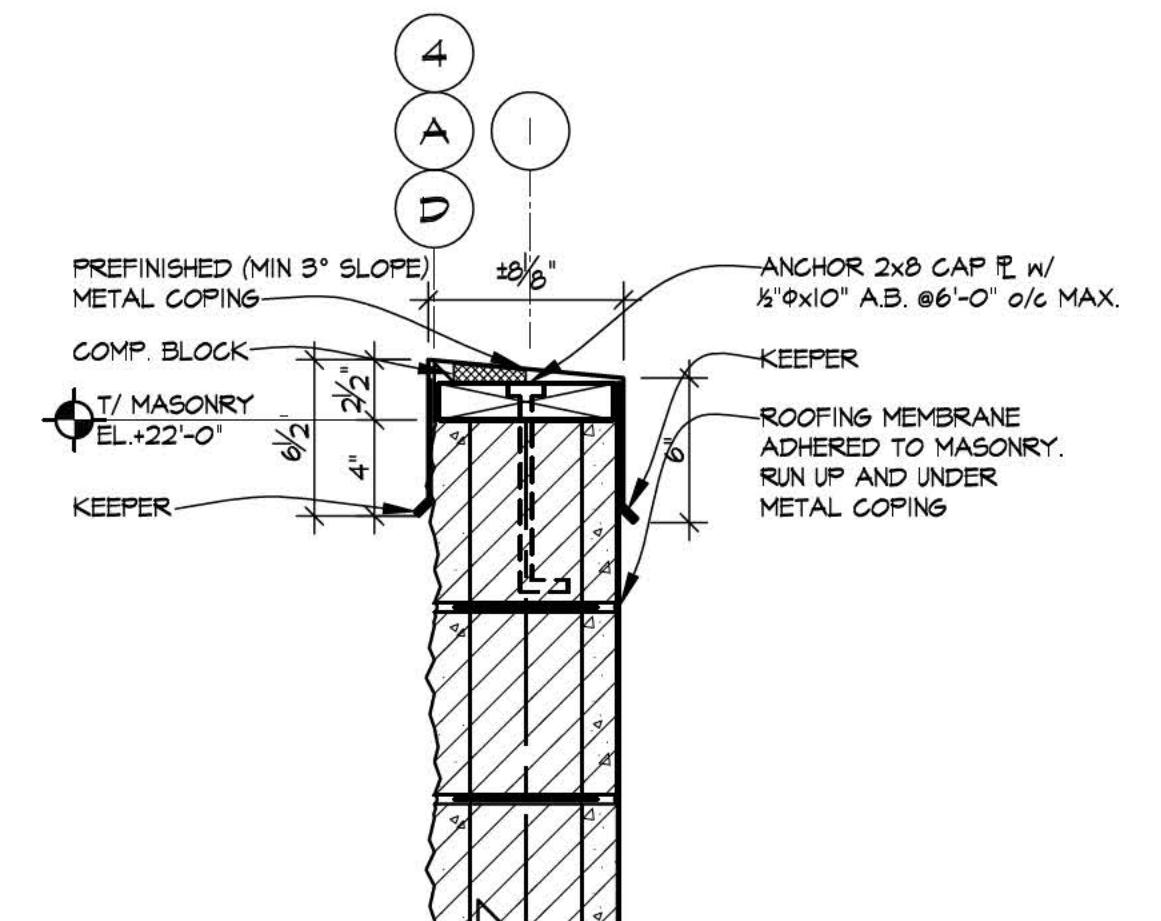
T-18 DRAWING	NOT FOR COORDINATION	1/1/21
FOR BIDDING	FOR PERMIT	1/1/21
FOR CONTRACTING	FOR CONSTRUCTION	

KMA & ASSOCIATES, INC. ARCHITECTS
SUITE F
60015-1235
FAX(847)945-6669

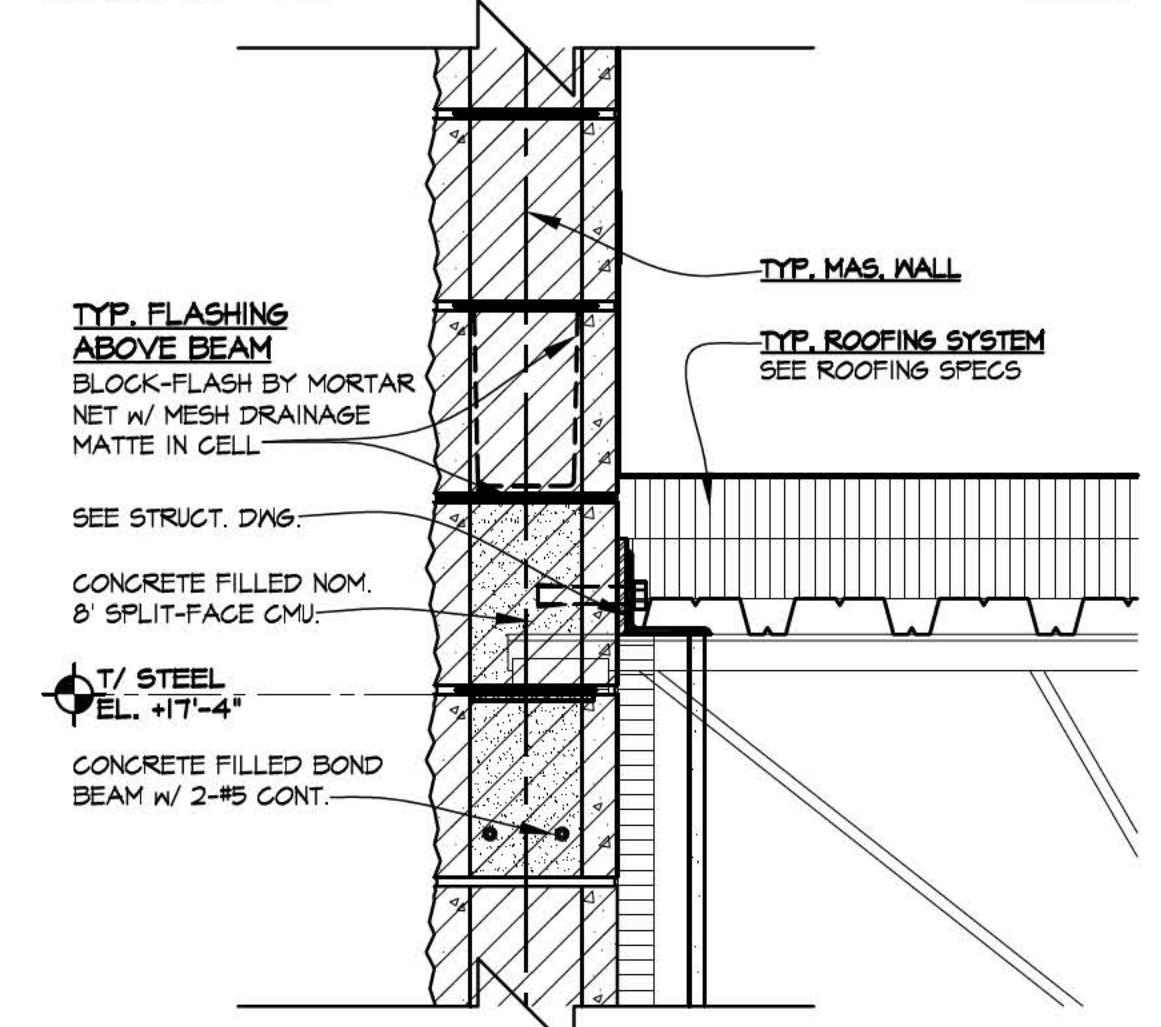


SINGLE NYTHE THRU-WALL MASONRY BLOCKFLASH INSTALLATION NOTES

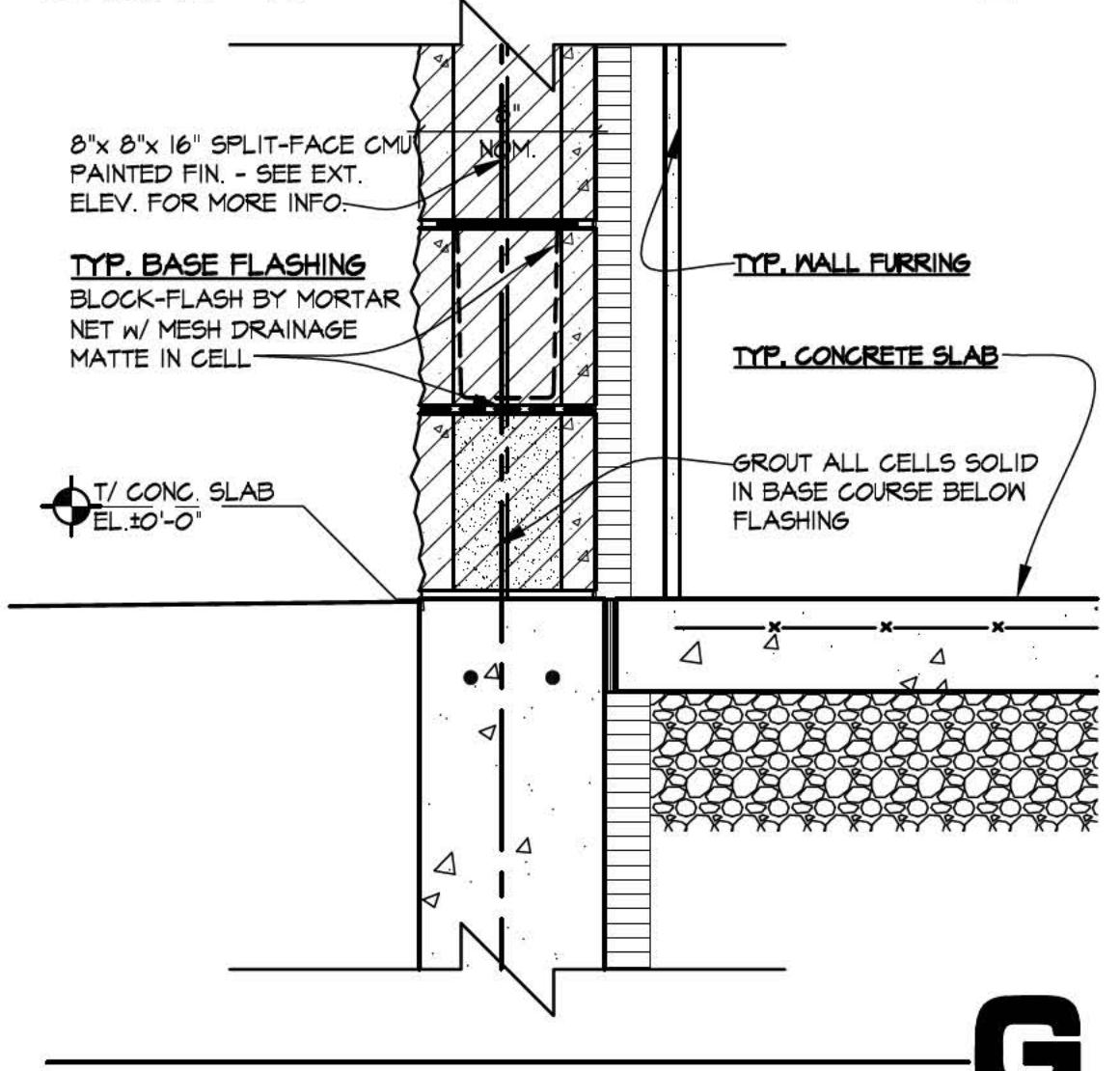
- BlockFlash is a product of Mortar Net Solutions. Provide BlockFlash near base of wall & above all lintels, steel beams, solid cores, bond beams and above any multi-nythe condition.
- See all wall sections for complete information.
- BlockFlash is to be installed ABOVE GRADE ONLY.
 - Fully grout masonry cores / cells directly below BlockFlash, for one course minimum.
 - Install the BlockFlash course by spacing BlockFlash Pan units over the cores of each block.
 - Use the reference lip on bottom of the BlockFlash spout to position the pan against front of block. The drip edge on the weep spout will extend slightly. Make sure the connector bridges overlap the next pan this will divert water into adjoining BlockFlash pans.
 - Continue BlockFlash a minimum of one cell beyond edge of any intel opening.
- Vertical rebar/grouted cells/corners: Where walls are reinforced, eliminate the BlockFlash pan at the grouted core and attach the connector bridge from the adjoining pan by bending it back and forth a few times. You same technique for corners. Cross bed webs adjacent to the grouted core making sure to overlap the BlockFlash flange. Use same technique for corners.
- Mortar spreading: Use standard mortar spreading techniques with mortar lapped first over the inner and second over the outer flanges of the BlockFlash pane. This will stabilize the pane during the installation and later help divert moisture into the BlockFlash pane. Cross bed mortar front to back on both sides of the grouted cells to prevent grout from flowing onto pan adjacent to grouted cells.
- Drainage: With 8, 10 and 12 inch pons install one 7" x 16" Drainage Mat in each CMU core in the course directly above the pan course. With 6 inch pons install one 7" x 14" Drainage Mat in each CMU core directly above the pan course. 6 inch pan should run continuously so the bridge of each pan overlaps onto the pan next to it as with other sizes, but the 6 inch size pan may not align perfectly over every CMU cell or structural brick core. The Drainage Mat for all sizes should be installed front and back of CMU cells not side to side, and should touch both walls of the CMU and the BlockFlash pan. Properly installed Drainage Mats catch and suspend mortar droppings above the pans and provide pathways for water to flow past the droppings to the pans.
- Tooling: Tool all head and bed joints and remove any obstruction from the weep spouts.



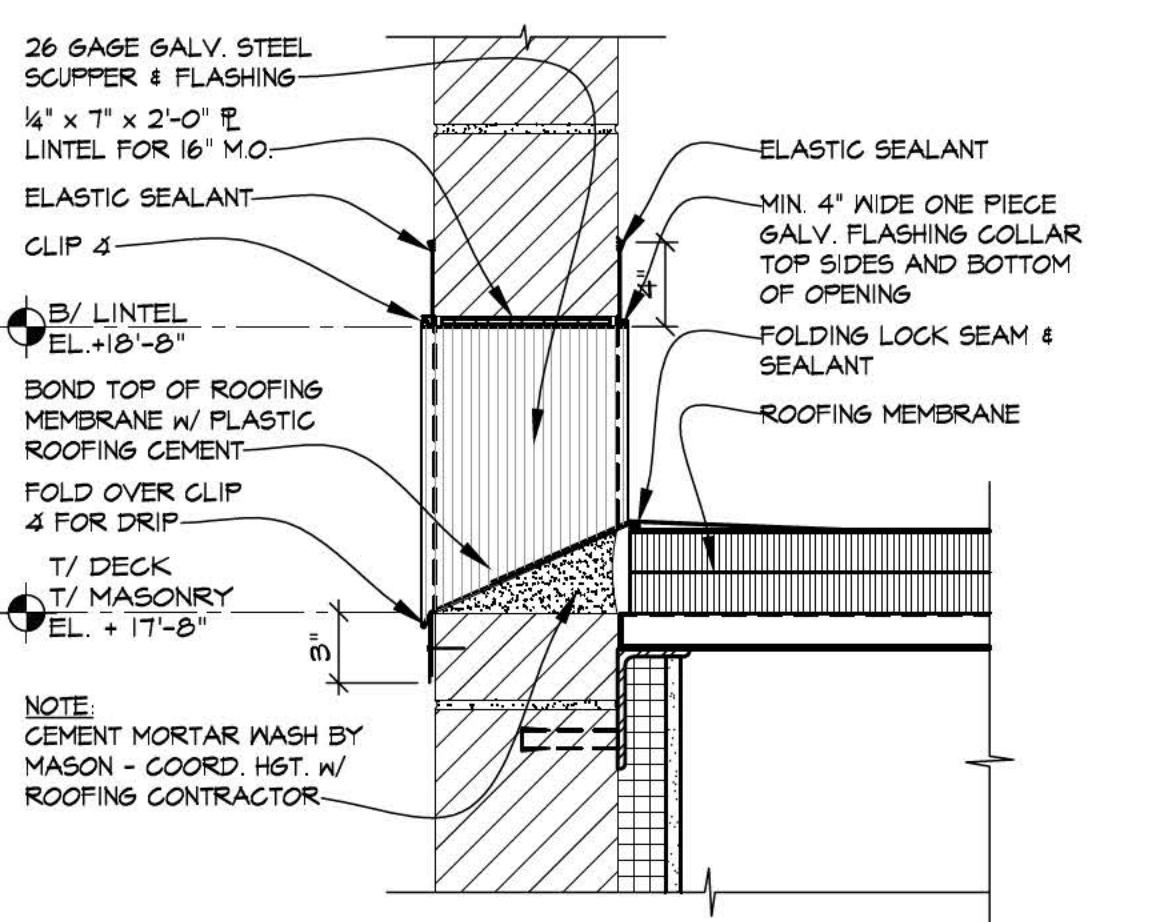
SCALE: 1 1/2" = 1'-0"



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

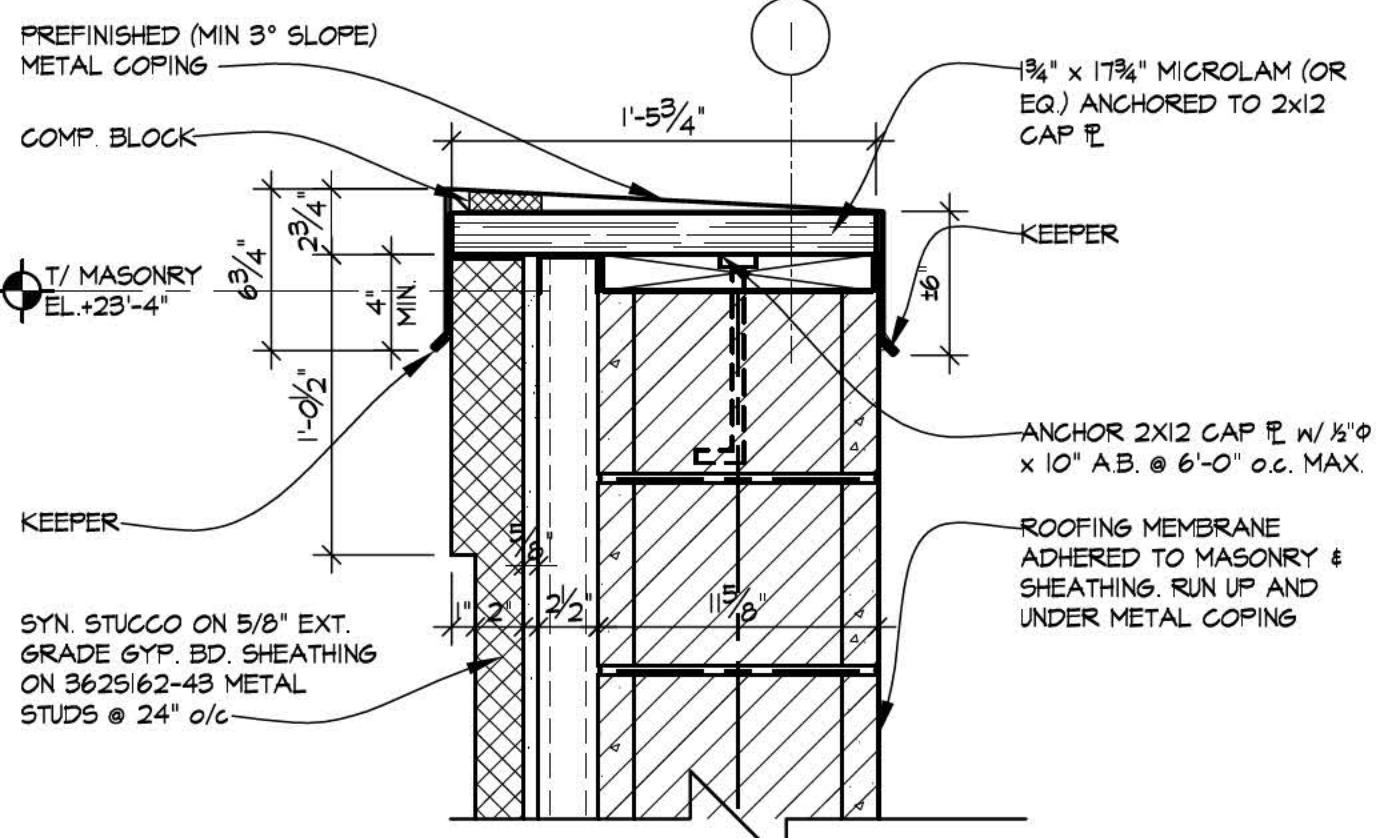


SCALE: 1 1/2" = 1'-0"

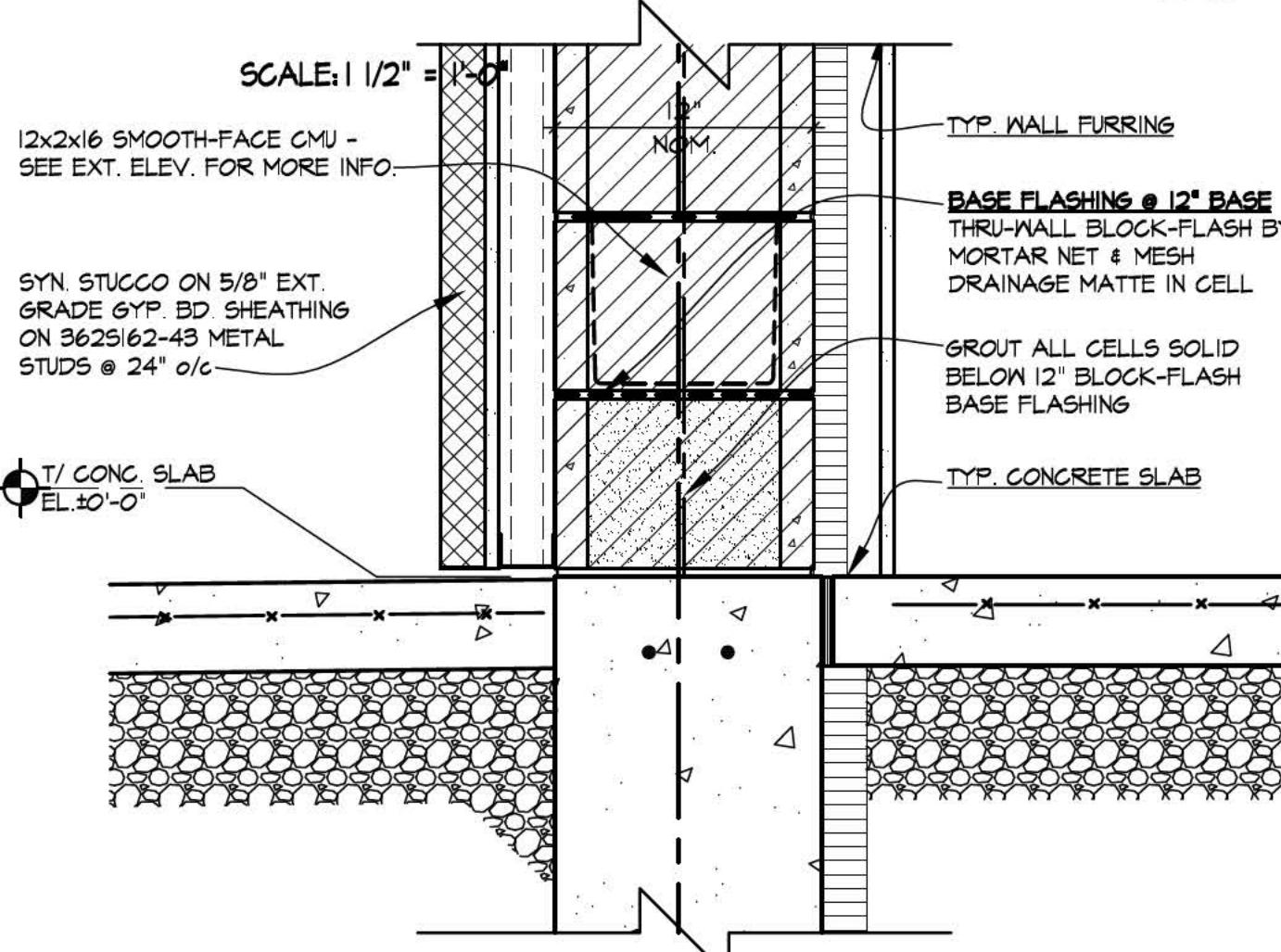


ROOF SCUPPER

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



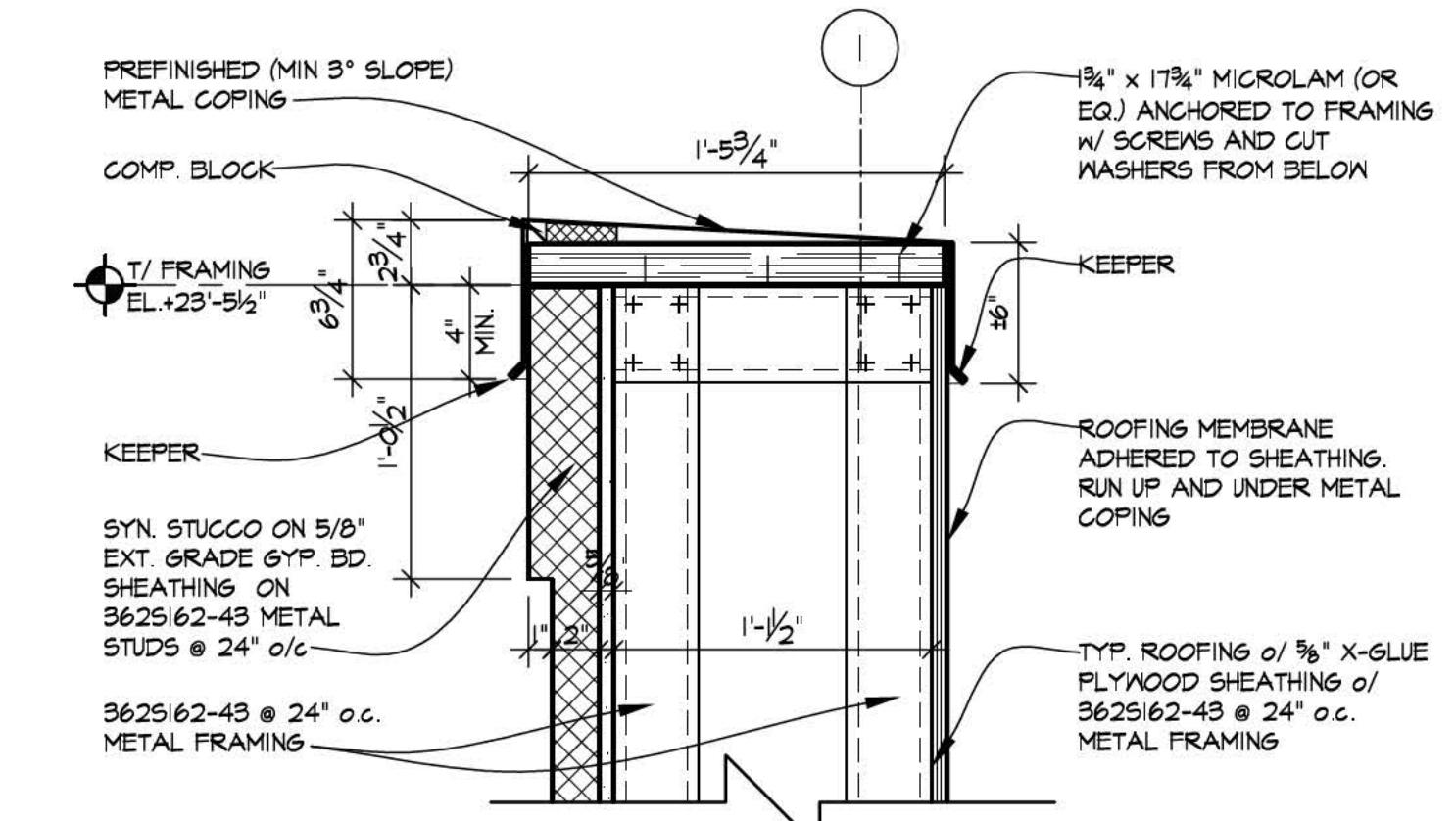
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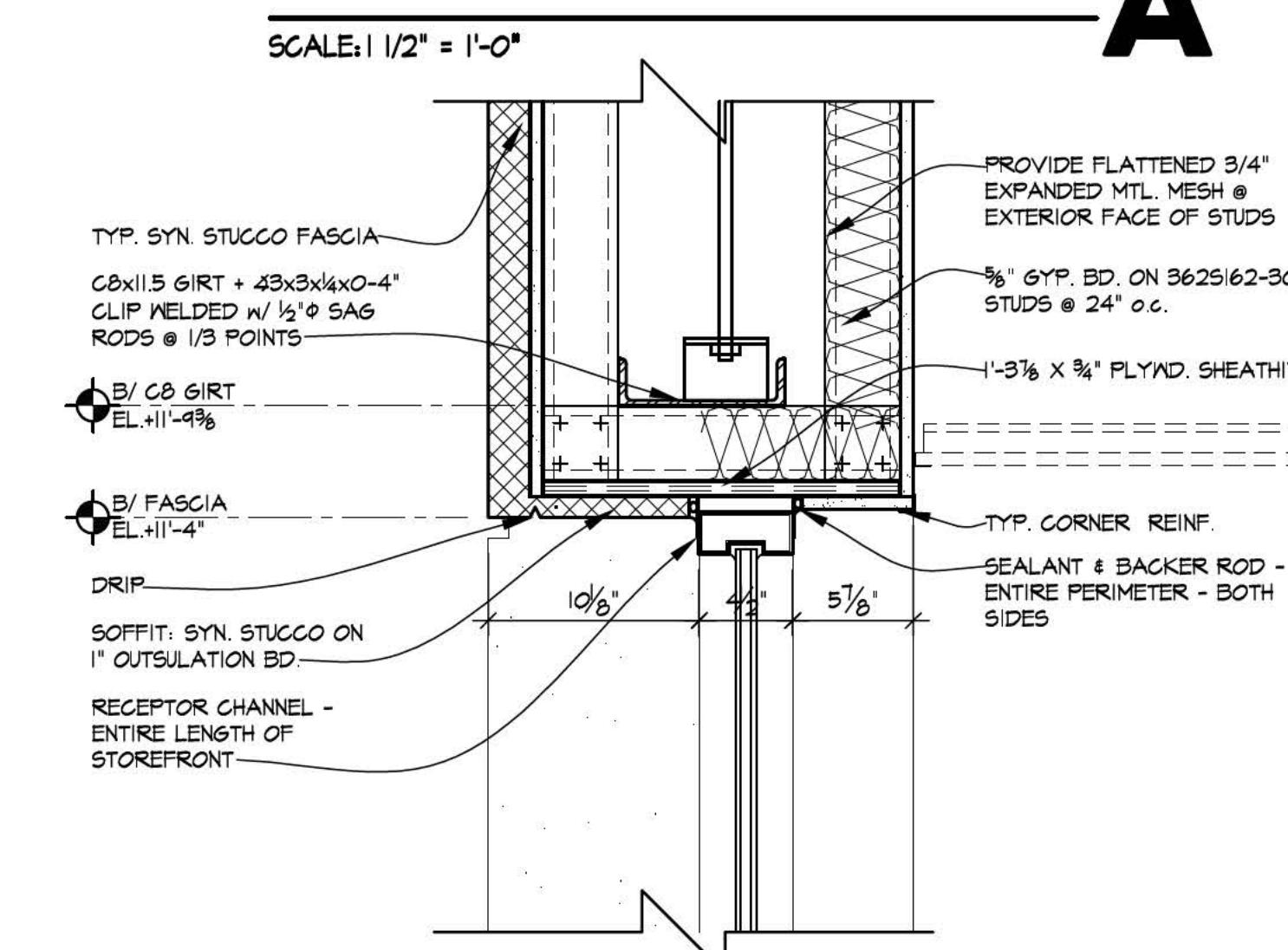
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EXTRUDED POLYSTYRENE INSULATION BOARD	
POLYSTYRENE BOARD INSULATION IS LIMITED TO A FLAME SPREAD OF 25 OR LESS (ACTUAL = 5) AND A SMOKE DEVELOPED RATING OF 450 OR LESS (ACTUAL = 165) PER ASTM E84. INSULATION AND STUDS TO BE FACED WITH A FACE LAYER OF 1/8" FIRECODE 'C' GYPSUM DRYWALL PROTECTION AS REQUIRED BY CODE	
FIBERGLASS INSULATION	
FIBERGLASS INSULATION TO BE TYPE FLAME SPREAD 25 INSULATION, FACED WITH A VAPOR BARRIER OF MAX. 10 PERM RATING WHEN TESTED IN ACCORDANCE WITH ASTM E96. THE FLAME SPREAD INDEX OF 25 AND A SMOKE DEVELOPED INDEX OF 160 PER ASTM E84.	
PLYWOOD SHEATHING	
ALL PLYWOOD ROOF & WALL SHEATHING SHALL BE FASTENED #18 SCREWS @ 6" O.C. @ SUPPORTED PLYWOOD EDGES, AND 12" O.C. @ INTERMEDIATE SUPPORTS, UNO. ROOF & WALL PLYWOOD SHEATHING TO MEET DOG PS 1 OR 2 STANDARDS	
GYPSUM BOARD & ACCESSORIES	
ALL GYPSUM BOARD MATERIALS AND ACCESSORIES SHALL CONFORM TO THE APPROPRIATE STANDARDS LISTED BELOW:	
ACCESSORIES FOR GYPSUM BD	ASTM C 1047
GYPSUM WALLBOARD	ASTM C 74
JOINT REINF TAPE & COMPOUND	ASTM C 474, C 475
STEEL SCREWS	ASTM C 454; C 1002
STEEL STUDS NON-LOAD BEARING	ASTM C 645
WATER RESISTANT GYP BACKING BD	ASTM C 630
REINFORCED GYP PANELS	ASTM C 1278
TESTING SYSTEM AND GYPSUM PRODUCTS	ASTM C 22, C 412; C 473

H



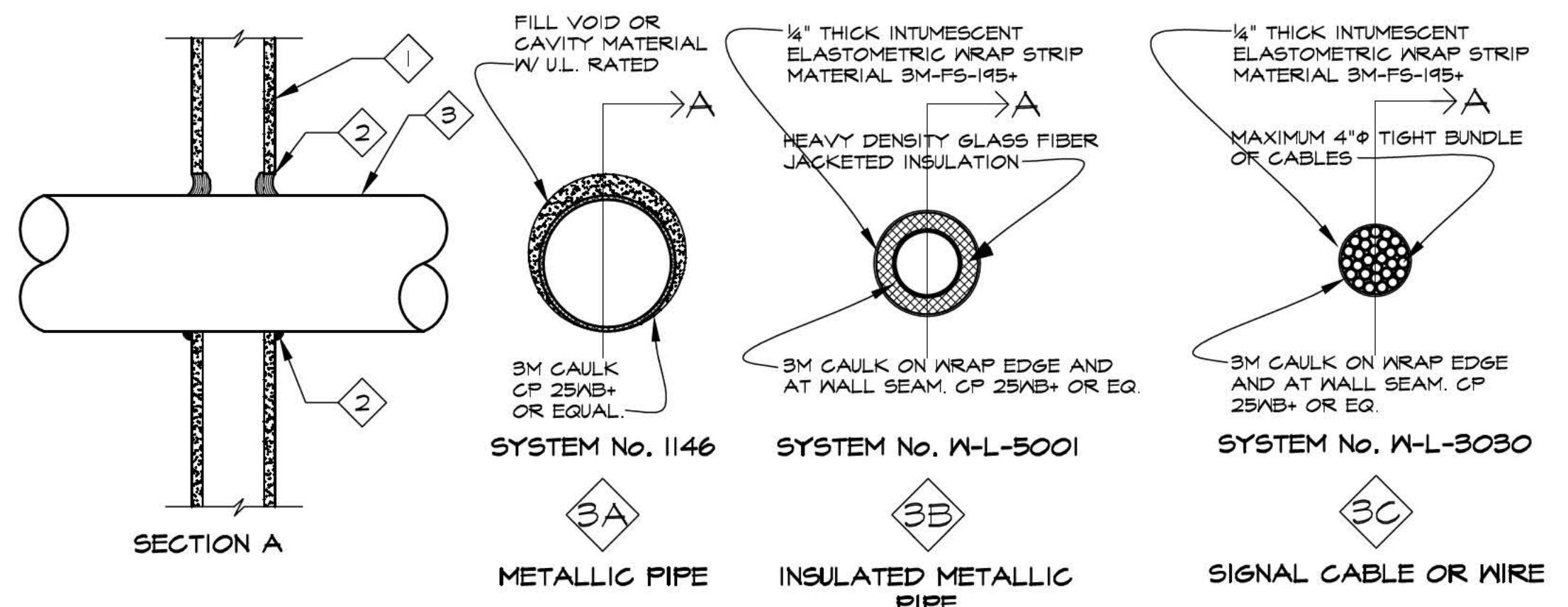
C



B

INTERIOR FINISH SCHEDULE

SEE BWCO DRAWINGS
FOR INTERIOR FINISHES



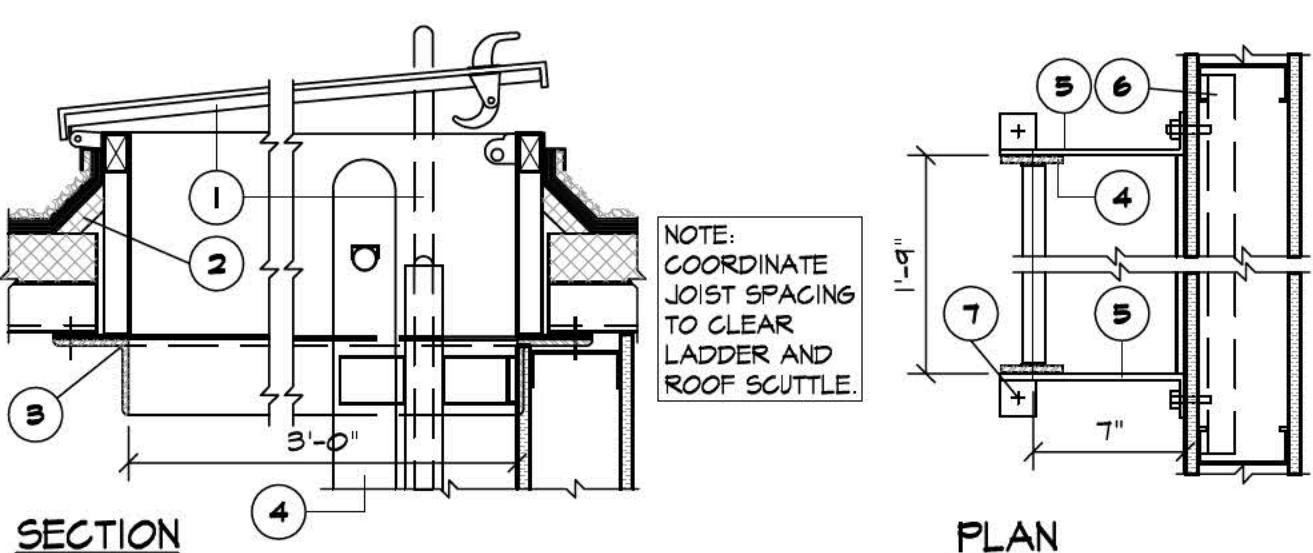
TYPICAL DEMISING WALL PENETRANT RESTORATION DETAIL

SCALE: 1/4" = 1'-0"
DRAWING LEGEND NOTES

- (A) WALL ASSEMBLY
- (B) 1/8" THICK MINIMUM CAULK 3M CP 25WB+ OR EQUAL
- (C) THROUGH WALL PENETRANT
- (D) METALLIC PIPE (SYSTEM W-L 1146)
 - 1. STEEL PIPE 12" (OR SMALLER) SCHED. 10 (OR HEAVIER)
 - 2. IRON PIPE 12" (OR SMALLER)
 - 3. CONDUIT 6" (OR SMALLER)
- (E) SIGNAL CABLE OR WIRE (SYSTEM W-L 5001)

NOTE:
CONSULT INDIVIDUAL PENETRATION SYSTEM
DESIGNS IN THE UL FIRE RESISTANCE
DIRECTORY FOR ADDITIONAL INFO.

4. COPPER TUBING, 6" (OR SMALLER) TYPE L (OR HEAVIER)
5. COPPER PIPE, 6" (OR SMALLER) REGULAR (OR HEAVIER)
- (F) INSULATED METAL PIPE (SYSTEM W-L 5001)
 1. STEEL PIPE 12" (OR SMALLER) SCHED. 10 (OR HEAVIER)
 2. COPPER TUBING 6" (OR SMALLER) TYPE L (OR HEAVIER)
 3. COPPER PIPE, 6" (OR SMALLER) REGULAR (OR HEAVIER)
- (G) SIGNAL CABLE OR WIRE (SYSTEM W-L 5001)



KEYED NOTES

1. ROOF SCUTTLE - 2'-6" X 3'-0" TYPE "S" WITH "LADDER-UP" SAFETY POST MODEL 2 BY BILCO TO SECURE SCUTTLE TO ROOF STRUCTURAL STEEL WITH THRU BOLTS ACCORDING TO MANUFACTURER'S DIRECTIONS. HINGE PINS ARE TO BE WELDED NON-REMOVABLE.
2. STANDARD 1" FIBER CANT, BUILT UP ROOFING & COUNTER FLASHING.
3. 3/4" X 3/4" X 14" ANGLED WELDED FRAME, EXTEND AND SECURE TO BUILDING ROOF STRUCTURE AS REQUIRED.
4. 2 1/2" FLAT STL BAR SIDE RAILS, 8" DIA STL RINGS FURNISHED INTO RAILS 12" O.C. & WELDED W/M. MEAC SLIP-RESISTANT RUNG COVERS W/A FINISH COAT RUST INHIBITIVE PAINT.
5. PROVIDE 2 1/2" X 3/8" THICK FLAT BENT STEEL BRACKETS AT MAX. 4'-0" CENTERS, WELD TO SIDE RAILS, WELD TOP TO STEEL ANGLE FRAME.
6. AT METAL STUD WALL, PROVIDE 1 1/2" O.R. STEEL REINFORCING CHANNELS WITH WELDED 3/8" THRU BOLTS TO RECEIVE BRACKETS. CUT STUD FLANGES TO RECEIVE REINFORCING CHANNEL. AT MASONRY, FASTEN BRACKETS WITH 3/8" X 2 1/2" WEDGE "RED HEAD" OR "MOLLY" ANCHOR BOLTS.
7. PROVIDE 2 1/2" X 2 1/2" X 3/8" WELDED CLIP ANGLES SECURED TO CONCRETE FLOOR WITH 1/2" X 2 1/2" WEDGE "RED HEAD" OR "MOLLY" ANCHOR BOLTS.

LADDER & SCUTTLE DETAIL

SCALE: NONE

DOOR SCHEDULE

MK	DOOR				DOOR HARDWARE	FRAME			DETAILS			FIRE RATING	REMARKS (REFER NOTES)	
	SIZE (W X H X D)	TYPE	SWING	MATERIAL		GLAZ. SET #	KEYED	TYPE	MATERIAL	HEAD HEIGHT	HEAD	JAMB	SILL	
1	3'-0" X 7'-0" X 1-3/4" (STOREFRONT ENTRY DOOR)	A	REFER TO FLOOR PLAN	ALUMINUM	1	A	1	ALUMINUM						1, 2
2	3'-0" X 7'-0" X 1-3/4" (DELIVERY DOOR)	B	REFER TO FLOOR PLAN	INSULATED METAL	2	A	2	INSULATED METAL	4" (IF MASONRY)	SEE 3/A1				1, 2, 3
3	6'-0" X 8'-0" (DRAWDOWN DELIVERY DOOR)	D	SECTIONAL OVERHEAD	INSULATED METAL	3			MANUFACTURER'S STANDARDS		SEE 4/A1				1

SEE BWCO DRAWINGS FOR INTERIOR DOORS

7	3'-0" X 7'-0" X 1-3/4" (SHOWROOM EGRESS DOOR)	B	REFER TO FLOOR PLAN	INSULATED METAL	6		2	INSULATED METAL	4" (IF MASONRY)	SEE 3/A1				1, 3
8	3'-0" X 7'-0" X 1-3/4" (INTERIOR VESTIBULE DOOR)	A	REFER TO FLOOR PLAN	ALUMINUM	7		1	ALUMINUM						1

NOTES:
1. ALL DOORS SHALL BE SHOP PREPARED FOR HARDWARE.
2. ALL EXTERIOR DOORS TO BE KEYED ALIKE. CONTRACTOR TO FIELD VERIFY AND MATCH CORE OF DOOR MARKED "2".
3. EXTERIOR DOOR, FRAME AND HARDWARE OWNER FURNISHED AND CONTRACTOR INSTALLED. VERIFY WITH G.C.
4. CONTRACTOR'S OPTION TO PURCHASE INTERIOR DOORS, FRAMES, AND HARDWARE THROUGH PREFERRED VENDOR. REFER TO SCOPE OF WORK SCHEDULE.

LOCKNET
100 COURCHELLE DRIVE
NICHOLSVILLE, KY 40356
CONTACT: PAM PEEL
PHONE: 800-887-4307 EXT 133
FAX: 859-881-5499
EMAIL: construction@locknet.com

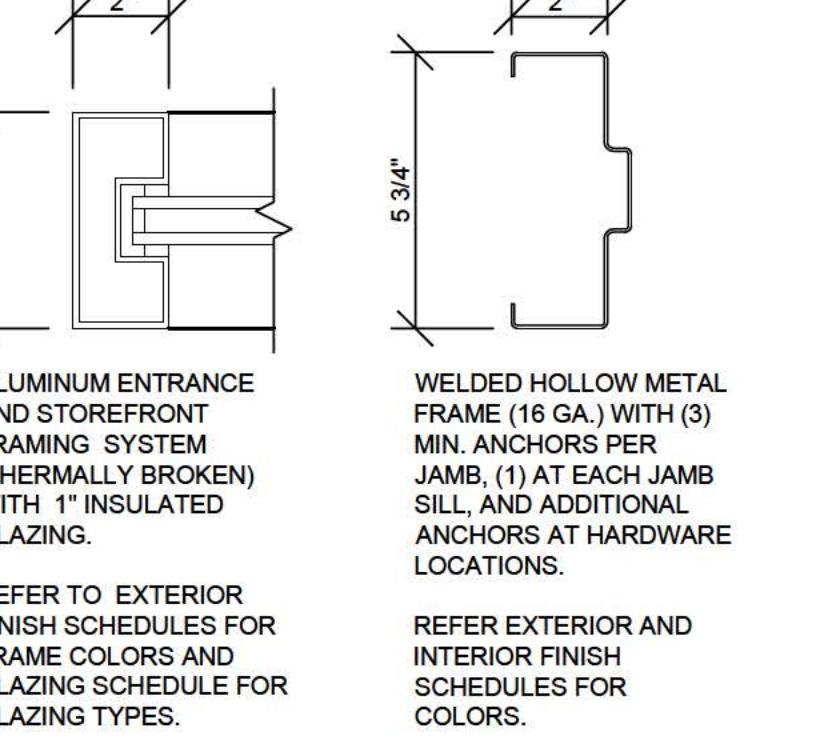
SPECIAL NOTE:
UNLESS OTHERWISE INDICATED, KNOCK
DOWN (KD) TYPE DOOR FRAMES ARE NOT
PERMITTED.

GENERAL NOTES

- (A) N/A
- (B) N/A
- (C) REFER TO FLOOR PLAN, ELEVATIONS, AND SECTIONS FOR ADDITIONAL REQUIREMENTS.
- (D) REFER TO EXTERIOR SCHEDULES FOR COLORS. PERIMETER SEALANT COLOR TO MATCH FRAME COLOR UNLESS OTHERWISE INDICATED.

FRAME TYPES

(SCALE 3" = 1'-0")



1

2

ROOFING SYSTEM SPECIFICATIONS

1. BASE BID - TYP. EPDM ROOF SYSTEM: FULLY-ADHERED MIN. 45 MIL BLACK EPDM ROOFING MEMBRANE OVER POLYISOCYANURATE INSULATION.
2. ALTERNATE BID - TYP. TWO SINGLE PLY ROOFING SYSTEM: MIN. 45 MIL WHITE TPO THERMOPLASTIC POLYOLEFIN SINGLE-PLY ROOFING MEMBRANE (MEETING ASTM STANDARDS D2147, D2178, D312, D3909 FOR MATERIAL USED), OVER POLYISOCYANURATE INSULATION.
3. PROVIDE MINIMUM 2 LAYERS OF POLYISOCYANURATE INSULATION MECHANICALLY FASTENED TO 1/2" METAL ROOF DECK. MINIMUM INSULATION "R" VALUE SHALL BE .30 (SINGLE LAYER WILL NOT ACHIEVE REQUIRED R-VALUE & THICKNESS). TOTAL ROOF SYSTEM SHALL HAVE 40 MPH WIND RESISTANCE PHYSICAL INTEGRITY AND IMPACT RESISTANCE IN ACCORDANCE WITH ASTM G55, D3746 AND D4272. ALL ROOF COMPONENTS TO BE INSTALLED PER MANUFACTURER'S WRITTEN TECHNICAL SPECIFICATIONS. PROVIDE ROOFING SYSTEM BY THE FOLLOWING APPROVED MANUFACTURERS OR APPROVED EQUAL:
 - FIRESTONE BUILDING PRODUCTS (800)428-4442
 - CARLISLE, INC. (717)245-1000
 - JOHNS MANVILLE (800)654-3103
4. ROOFING SYSTEM SHALL HAVE FIFTEEN (15) YEAR WARRANTY FROM DATE OF SUBSTANTIAL COMPLETION. ROOFING SYSTEM SHALL BE INSTALLED BY A QUALIFIED CONTRACTOR, APPROVED BY ROOFING SYSTEM MANUFACTURER, TO INSTALL MANUFACTURER'S PRODUCTS. ROOFING SYSTEM TO BE INSTALLED IN STRICT ACCORDANCE WITH THE ROOFING SYSTEM MANUFACTURER'S WRITTEN TECHNICAL SPECIFICATIONS. PROVIDE ROOFING SYSTEM BY THE FOLLOWING APPROVED MANUFACTURERS OR APPROVED EQUAL:
 - FIRESTONE BUILDING PRODUCTS (800)428-4442
 - CARLISLE, INC. (717)245-1000
 - JOHNS MANVILLE (800)654-3103

ROOF PLAN

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

DOOR HARDWARE SCHEDULE

ARE NOTES:
1. ALL HARDWARE TO BE ADA AND ANSI COMPLIANT.
2. VERIFY COMPATIBILITY OF HARDWARE SPECIFIED. NOTIFY ARCHITECT OF INCOMPATIBILITY ISSUES PRIOR TO ORDERING AND INSTALLATION.

SET NO. 1 (DR. 1) - EXTERIOR STOREFRONT DOOR

1 CYLINDER: 20-062 X US26D - "E" KEYWAY (REMOVABLE CORE)..... SCHLAGE

(FOLLOWING REQUIRED HARDWARE FURNISHED WITH WINDOW FRAMING DOOR SYSTEM)

1 PAIR OFFSET PIVOTS: 195/188 X 626..... RIXON

1 DEADLOCK: MS1860S X 626..... ADAMS RITE

1 STRIKE: MS400X 626..... ADAMS RITE

1 SET PUSH/PULLS: 90-150 X 626..... EFCO

1 CLOSER: 4041-3077-187-TB X 689 (ADJ. TO 8.5 LBS.)..... LCN

1 SET PERIMETER GASKETS: POLYMERIC BULB X LENGTH REQUIRED..... PEMKO

1 SWEEP: 245AP X LENGTH REQUIRED..... PEMKO

1 THRESHOLD: 270A X LENGTH REQUIRED (OFFSET PIVOT COMPATIBLE)..... PEMKO

1 CONTINUOUS HINGE: 780-112HD X LENGTH REQUIRED X 628..... HAGER

1 CYLINDER: 20-057 X 626 - "E" KEYWAY (REMOVABLE CORE)..... SCHLAGE

1 PANIC LOCK: 9300B X 486 X 689 - PRTO3 X 630 (THROUGH SEX BOLT MOUNTING)..... DORMA

1 CLOSER: 8616DST X SNB1 X 689 (ADJ. TO 8.5 LBS.)..... DORMA

1 SET PERIMETER GASKETS: QEBD-500 X LENGTH REQ'D..... SCHLEGEL

1 LATCH GUARD: LG100Z/X 626 (STRAIGHT W/ PIN W/ SEX BOLTS)..... LATCHGUARD

1 DOOR VIEWER: 698 - 190 DEGREE X 626..... IVES

1 KICK PLATE: 190S X 8" X 34" X 630..... HAGAR

1 DOOR BOTTOM SEAL: 31321 X LENGTH REQUIRED..... GLOBAL

1 THRESHOLD: 31206 X LENGTH REQUIRED..... GLOBAL

SET NO. 2 (DR. 2) - DELIVERY DOOR

1 CONTINUOUS HINGE: 780-112HD X LENGTH REQUIRED X 628..... HAGER

1 CYLINDER: 20-057 X 626 - "E" KEYWAY (REMOVABLE CORE)..... SCHLAGE

1 PANIC LOCK: 9300B X 486 X 689 - PRTO3 X 630 (THROUGH SEX BOLT MOUNTING)..... DORMA

1 CLOSER: 8616DST X SNB1 X 689 (ADJ. TO 8.5 LBS.)..... DORMA

1 SET PERIMETER GASKETS: QEBD-500 X LENGTH REQ'D..... SCHLEGEL

1 LATCH GUARD: LG100Z/X 626 (STRAIGHT W/ PIN W/ SEX BOLTS)..... LATCHGUARD

1 DOOR BOTTOM SEAL: 31321 X LENGTH REQUIRED..... GLOBAL

1 THRESHOLD: 31206 X LENGTH REQUIRED..... GLOBAL

SET NO. 3 (DR. 3) - OVERHEAD DELIVERY DOOR

REQUIRED HARDWARE FURNISHED WITH OVERHEAD DOOR SYSTEM (LOCKING FROM INSIDE ONLY)

SET NO. 6 (DR. 7) - SHOWROOM EGGS DOOR

3 HINGES: ECB1100 X 4 1/2" X 4 1/2" X 626 X NRP..... HAGER

1 EXIT ONLY PANIC LOCK: 8300B X 486 X 689..... HAGER

1 CLOSER: 5300MLT X 689 (ADJ. TO 8.5 LBS.) (THROUGH SEX BOLT MOUNTING)..... HAGER

1 SET PERIMETER GASKETS: QEBD-500 X LENGTH REQ'D..... SCHLEGEL

1 LATCH GUARD: LG100Z/X 626 (STRAIGHT W/ PIN W/ SEX BOLTS)..... LATCHGUARD

1 DOOR BOTTOM SEAL: 31321 X LENGTH REQUIRED..... GLOBAL

1 THRESHOLD: 31206 X LENGTH REQUIRED..... GLOBAL

SET NO. 7 (DR. 8) - INTERIOR VESTIBULE DOOR

(FOLLOWING REQUIRED HARDWARE FURNISHED WITH WINDOW FRAMING DOOR SYSTEM)

1 PAIR OFFSET PIVOTS: 195/188 X 626..... RIXON

1 SET PUSH/PULLS: 86-151 ULTRALINE W/ OFFSET PULL X 626..... EFCO

REVISIONS
T-1B DRAWING
NOT FOR BIDDING
FOR CONTRACTING
NOT FOR CONSTRUCTION

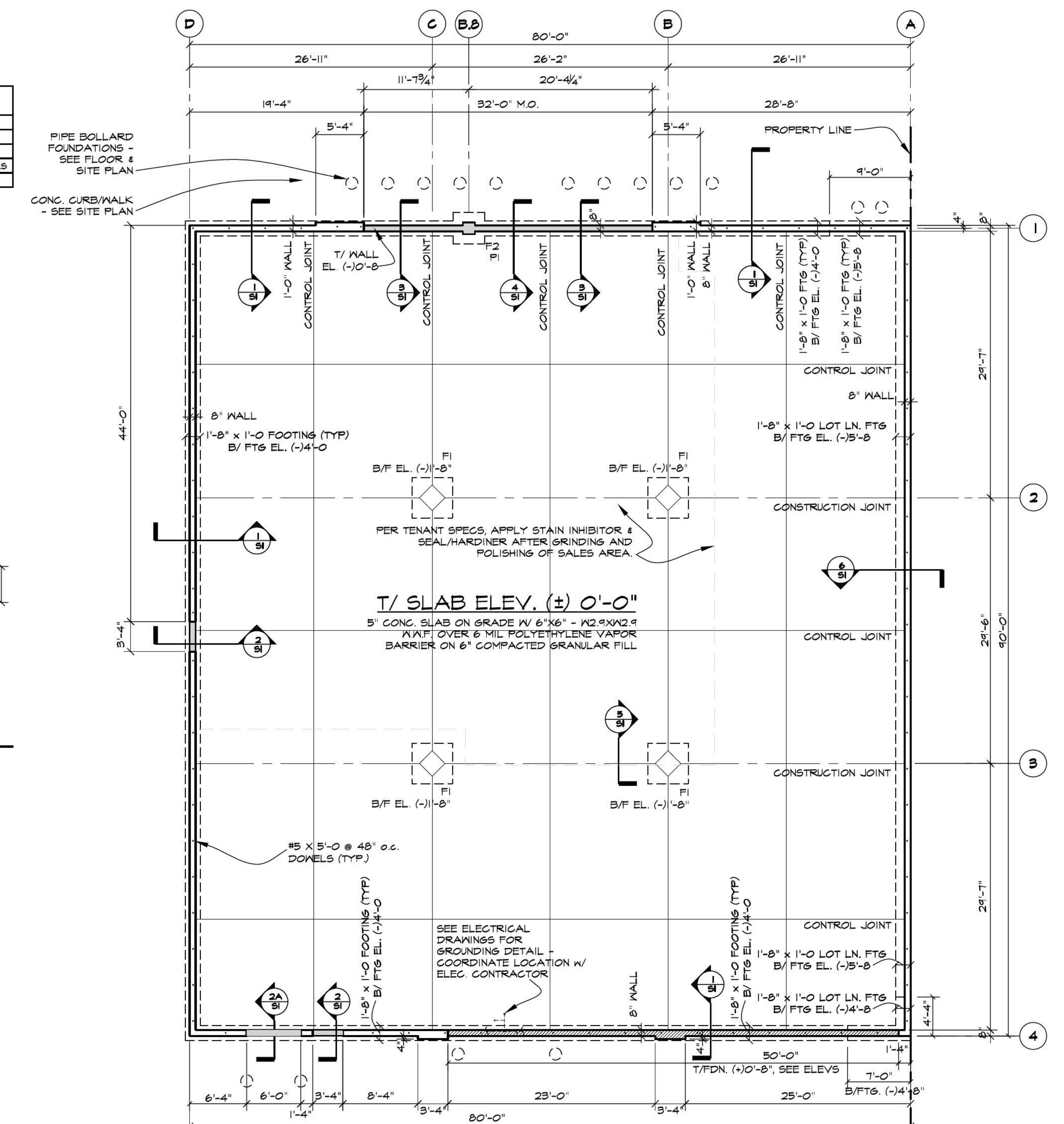
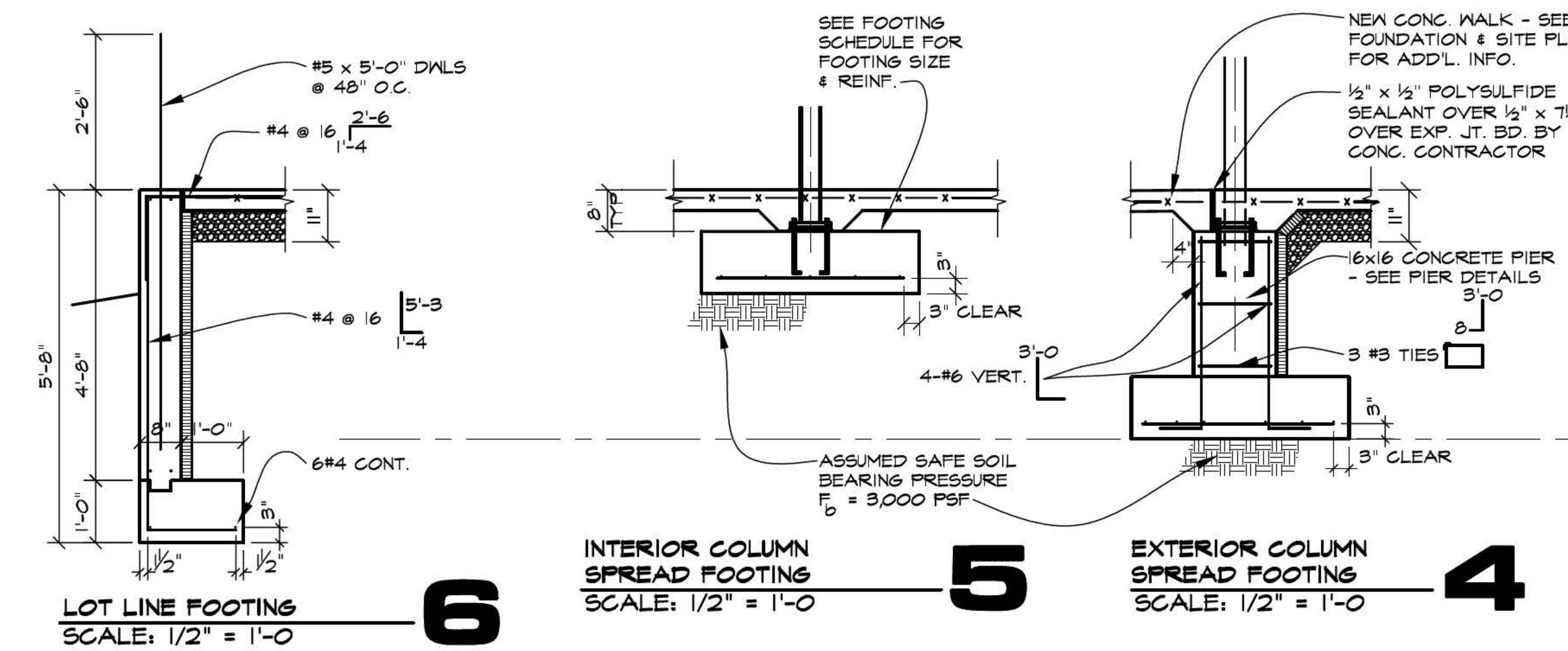
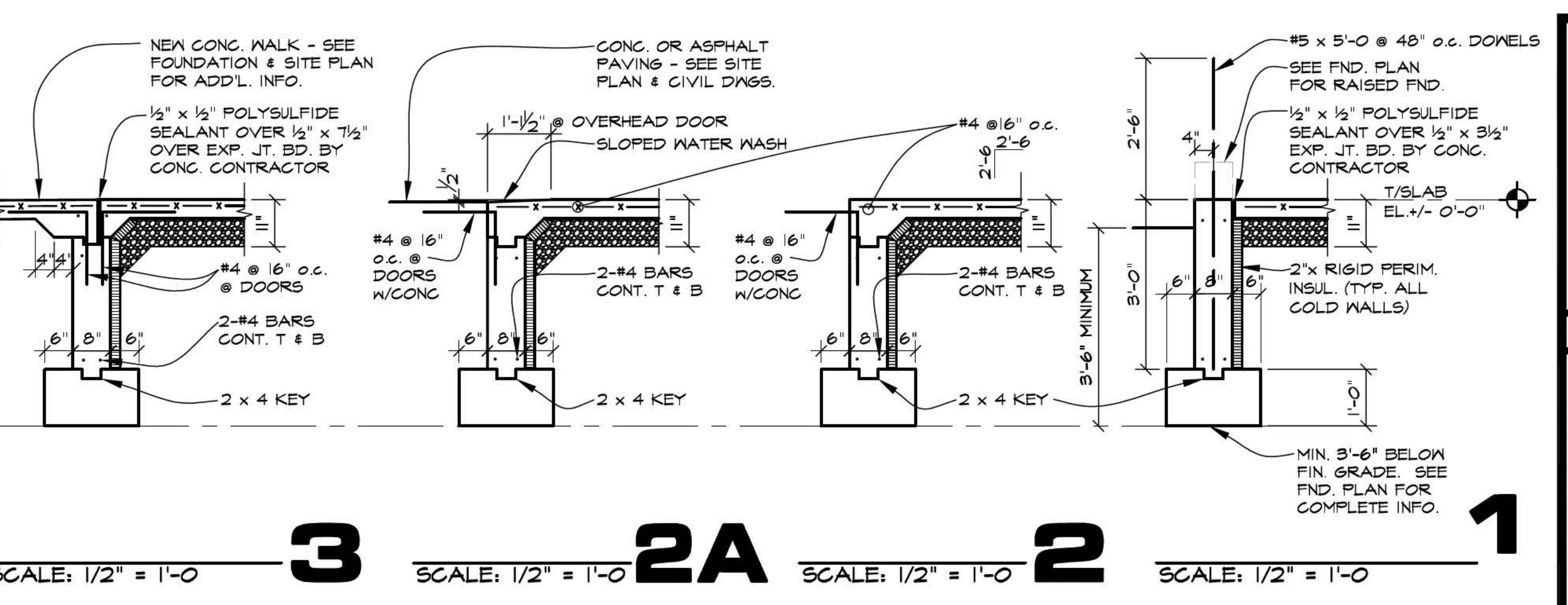
KMA & ASSOCIATES, INC. ARCHITECTS
1121 LAKE COOK ROAD
DEERFIELD, IL 60015-5235
(847)945-6869 FAX(847)945-0284+

O'REILLY AUTO PARTS
DOLTON PLAZA
1317 E. SIBLEY BLVD., DOLTON, IL 60419
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE
FOUNDATION PLAN
DETAILS
GENERAL NOTES

1906

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FOUNDATION PLAN

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

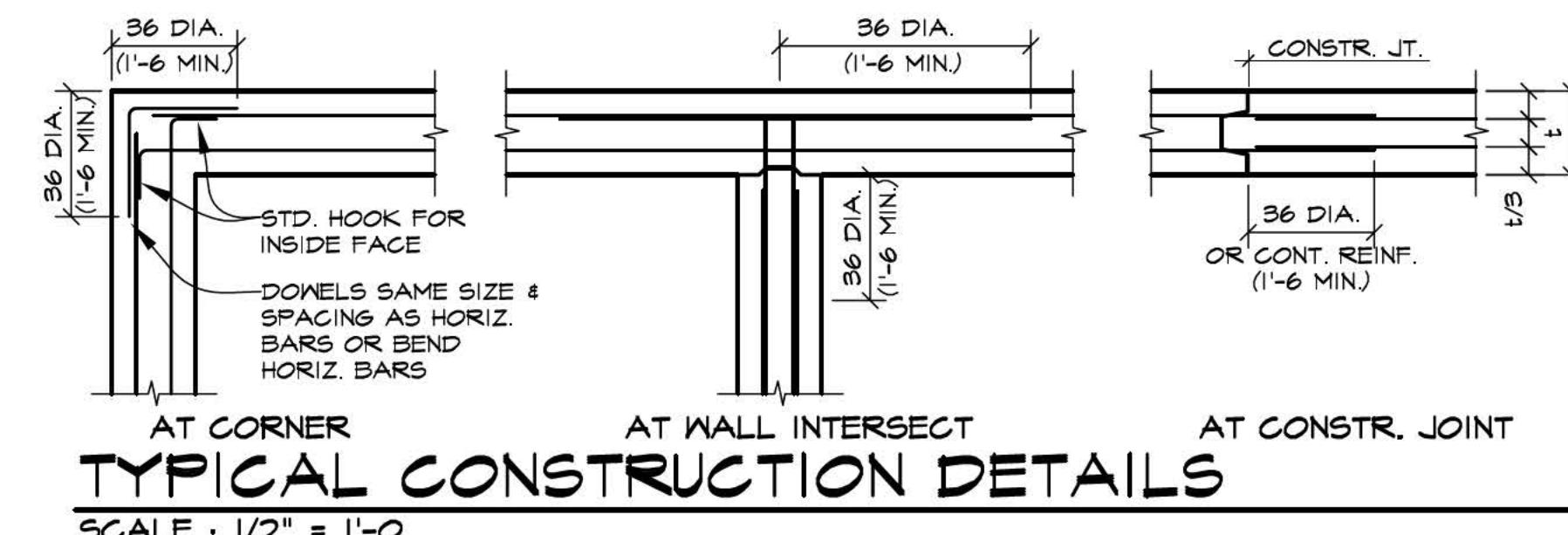
FOOTING SCHEDULE						
PAD			PIER			
MARK	SIZE	REINF. EA. WAY	BOTTOM ELEV.	SIZE	VERT. REINF.	TIES
F1	4'-6" X 4'-6" X 1'-0"	9 #4 EA	(-1)-8			
F2	3'-6" X 3'-6" X 1'-0"	6 #4 EA	(-4)-6	16 x 16	4 #6	#3 @ 12
						-0'-8
						PI
						SEE PIER DETAILS

CONCRETE NOTES

- ALL CONCRETE SHALL BE NORMAL WEIGHT AND HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. DRIVEWAYS AND SIDEWALKS SHALL BE 4000 PSI COMPRESSIVE STRENGTH.
- ALL REINFORCING BARS SHALL BE ASTM A615-60 AND SHALL HAVE DEFORMATIONS IN ACCORDANCE TO ASTM SPECIFICATIONS A-305 AND A-402 LATEST EDITIONS.
- ALL WELDED WIRE FABRIC SHALL BE ASTM A162. ALL FLATWIRK SHALL BE REINFORCED WITH 6 X 6 IN. X 1/4 IN. WELDED WIRE FABRIC UNLESS NOTED OTHERWISE. ALL WWF SHALL BE SET 1" DOWN FROM TOP OF SLAB.
- ALL REINFORCING BARS SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS, AND SECURED IN PLACE IN ACCORDANCE WITH PROCEDURES AND REQUIREMENTS OUTLINED IN THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES ACI-315, LATEST EDITION AND THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AC 318-81".
- MECHANICAL EQUIPMENT PADS, OPENINGS, ETC. SHOWN ON THE STRUCTURAL DRAWINGS ARE FOR CONFIGURATION ONLY. THEIR FINAL LOCATION SIZE, ETC. SHALL BE AS PER APPROVED SHOP DRAWINGS FOR THE EQUIPMENT OR AS REQUIRED BY THE ARCHITECT.
- SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL OPENINGS, SLEEVES, EQUIPMENT PADS, DEPRESSION, CURBS, FLOOR FINISHES, INSERTS, OTHER EMBEDDED ITEMS AND DETAILS.
- FABRICATORS SHALL SUBMIT CHECKED SHOP DRAWINGS FOR REINFORCING STEEL AND OTHER DETAILS TO THE ARCHITECT-ENGINEER AND OBTAIN APPROVAL PRIOR TO FABRICATION.
- ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.
- CONCRETE FLOOR SHALL HAVE HARDENER AND SEALER.
- SEE CONSTRUCTION NOTES AS SHOWN ON THE FOUNDATION PLAN.
- ALL INTERIOR CONCRETE SLABS SHALL HAVE HARD TROWEL FINISH. ALL EXTERIOR SIDEWALKS SHALL BE BROOM FINISHED WITH CONTROL JOINTS AT A MINIMUM OF 5 FEET ON CENTER IN EACH DIRECTION UNLESS NOTED OTHERWISE.
- CONCRETE CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL TRANSFORMER PAD, PYLON SIGN FOUNDATION & LIGHT POLE BASES.

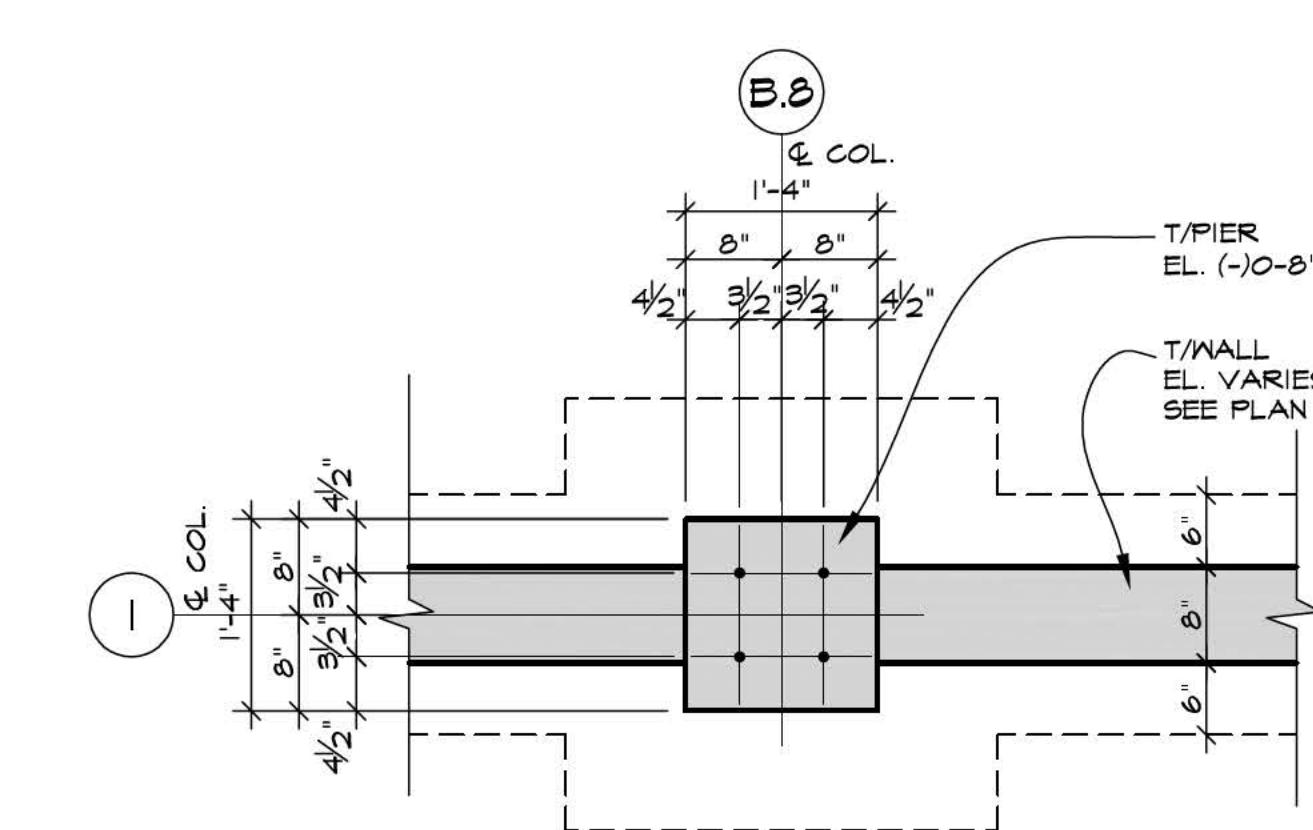
FLOOR CONSTRUCTION DETAILS

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



TYPICAL CONSTRUCTION DETAILS

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



PIER DETAILS

SCALE: 3/4" = 1'-0"

GENERAL SUBSTRUCTURE NOTES

- FOOTINGS ARE DESIGNED TO BEAR ON FIRM UNDISTURBED SOIL CAPABLE OF SUPPORTING A LOAD OF 3000 P.S.F., IF SOIL IS NOT CAPABLE OF SUPPORTING THIS LOAD AT ELEVATIONS SHOWN, DROP FOOTINGS TO REQUIRED STRATA.
- ALL FLOOR AND PAVEMENT SLABS SHALL REST ON WELL-COMPACTED FILL.
- TOP AND BOTTOM BARS SHOWN ARE TO BE CONTINUOUS IN ALL WALLS. PROVIDE CORNER BARS AT ALL OUTSIDE CORNERS.
- LAP WIRE MESH ONE FULL MESH AT SIDES AND ENDS.
- FOUNDATION WALL POUR SHALL BE A MAXIMUM OF 6' BETWEEN CONSTRUCTION JOINTS. PROVIDE CONTROL JOINTS AT SAME LOCATION AS MASONRY CONTROL JOINTS.
- FILL ALL COLUMN POCKETS WHEN FLOOR SLAB IS Poured.
- FOOTINGS ARE TO PROJECT A MINIMUM OF 8" BEYOND FACE OF WALL OR PIER UNLESS NOTED.
- WALL FLOORING WHICH STEP DOWN ON ELEVATION SHALL DO SO AT A MAXIMUM SLOPE OF ONE DOWN TO TWO HORIZONTAL.
- NO CONCRETE SHALL BE Poured IN EXCAVATION CONTAINING WATER OR ON FROZEN GROUND.
- SEE OTHER DRAWINGS FOR CURBS, PAVEMENT AND SIDEWALKS.
- SEE "CONCRETE NOTES" FOR ADDITIONAL INFORMATION.
- GENERAL MACHINE EXCAVATIONS FOR FOOTINGS SHALL STOP AT LEAST 6' ABOVE SCHEDULED ELEVATION OF BOTTOM OF FOOTING. THE FINAL EXCAVATIONS SHALL BE DUG BY HAND NOT MORE THAN 24 HOURS BEFORE THE CONCRETE IS PLACED.
- SOIL REPORT WAS PREPARED BY ECS LTD, BUFFALO GROVE, IL, ECS PROJ #16-1014 TITLED GEOTECHNICAL ENGINEERING REPORT SIBLEY LINCOLN PLAZA, SNC OF SIBLEY BOULEVARD & LINCOLN AVENUE, DOLTON, IL, AUGUST 22, 2014.

T-H DRAWING		1/12/19
NOT FOR COORDINATION	FOR BIDDING	1/12/19
NOT FOR CONSTRUCTION	FOR CONTRACTING	1/12/19
NOT FOR CONSTRUCTION	FOR CONSTRUCTION	

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SHEET TITLE

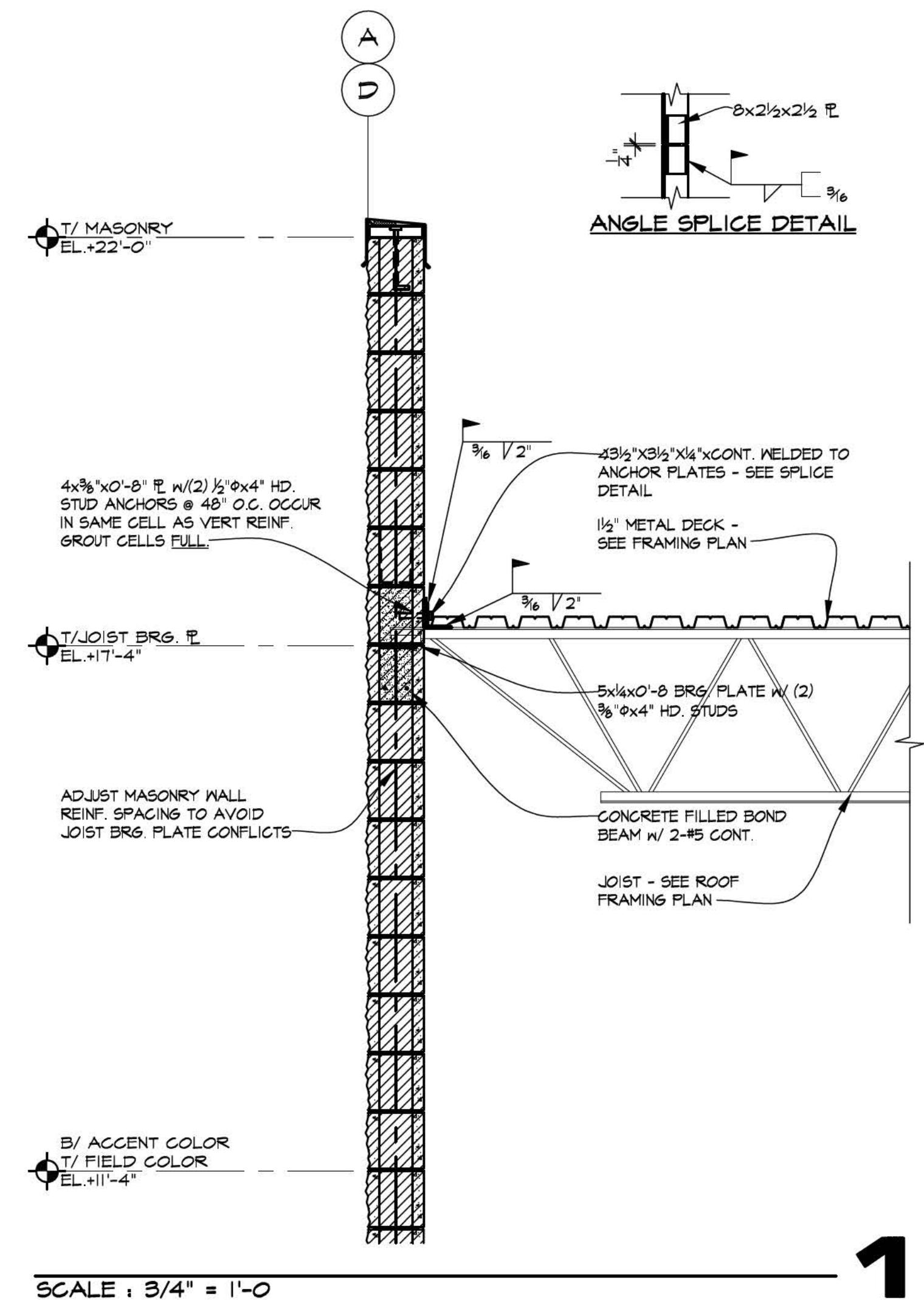
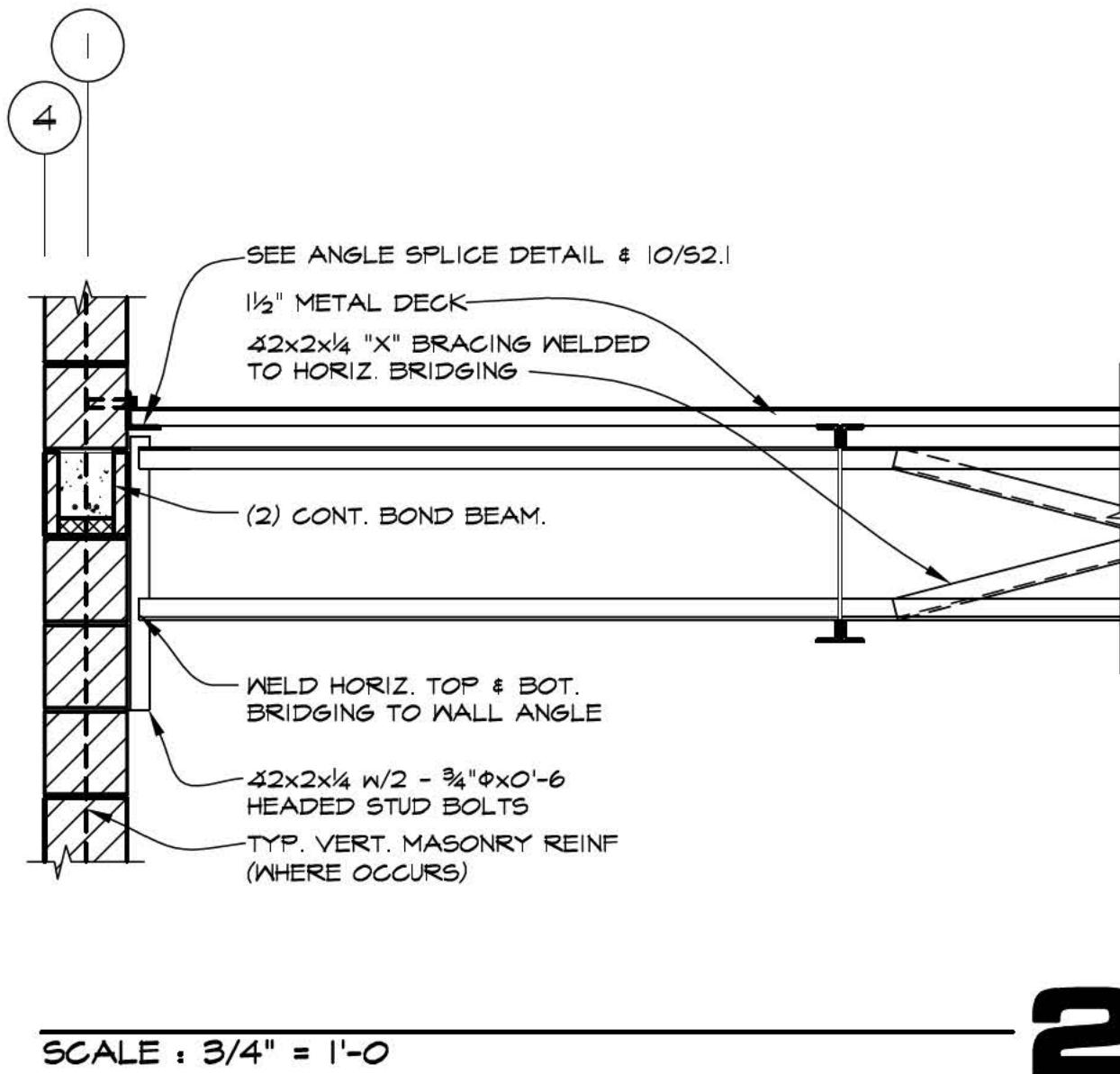
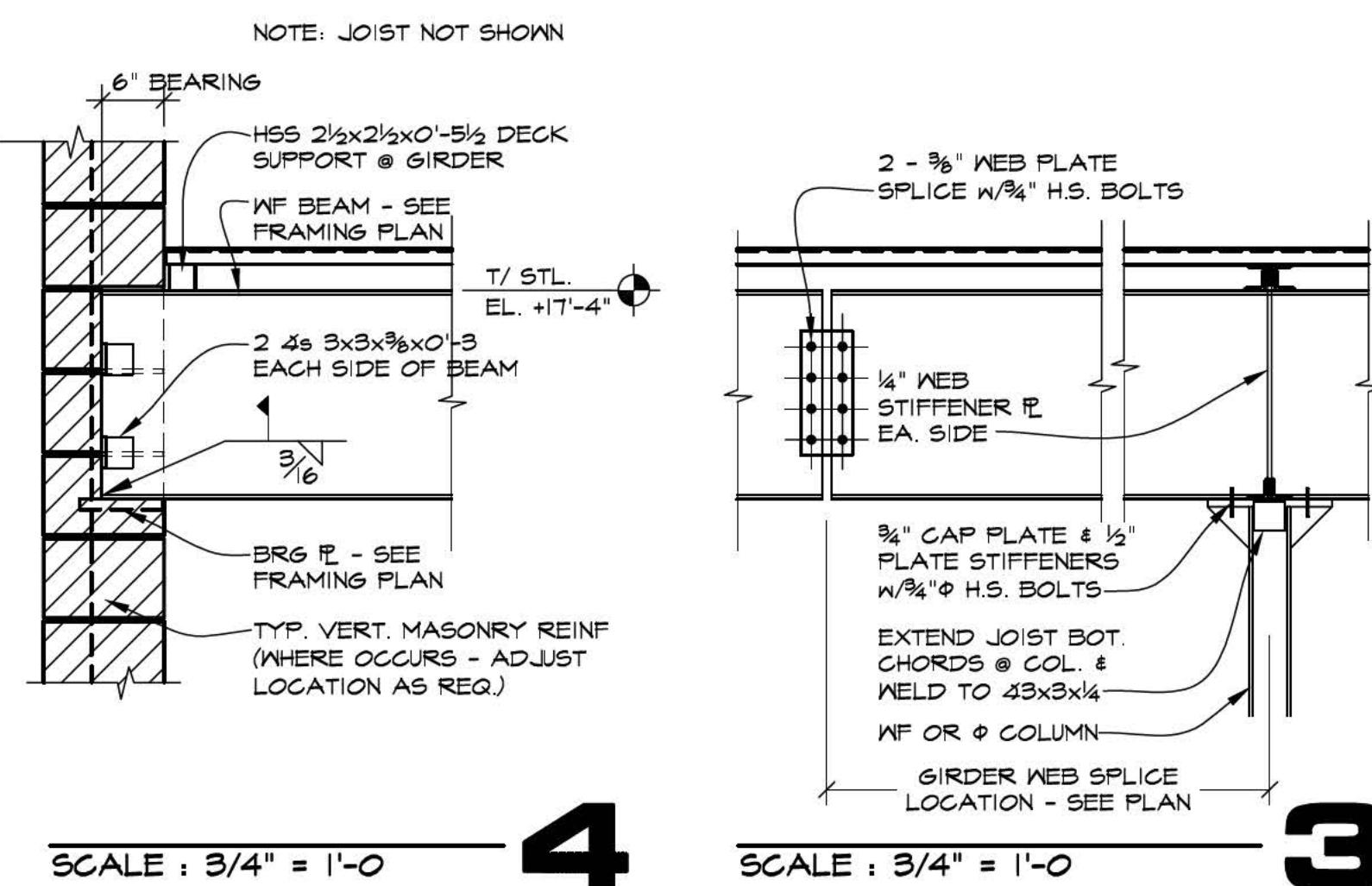
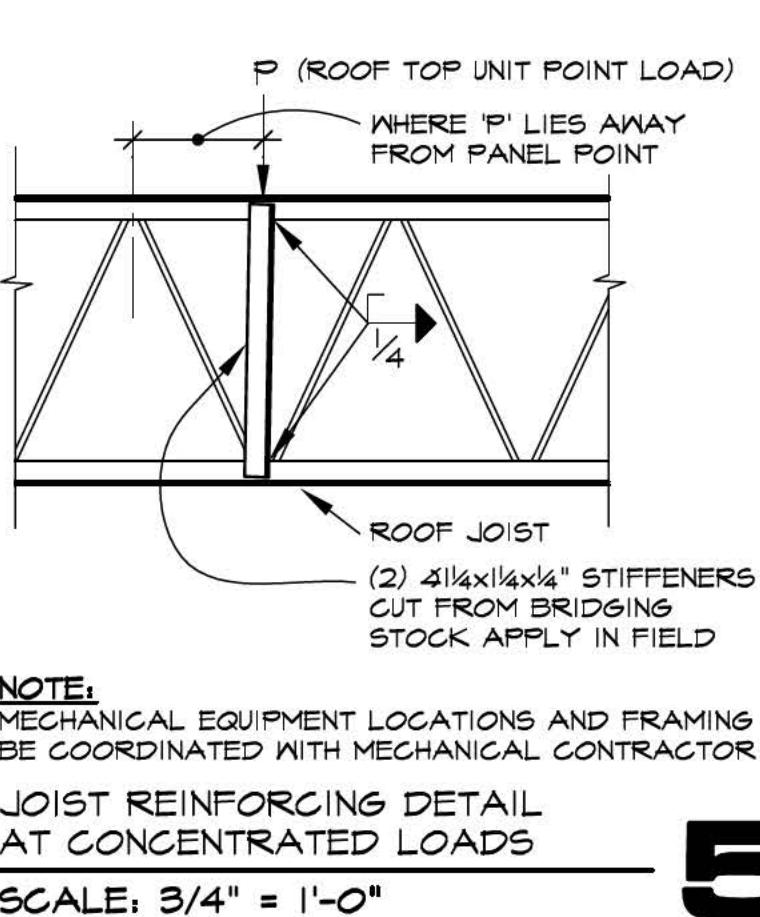
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DETAILS

2.1

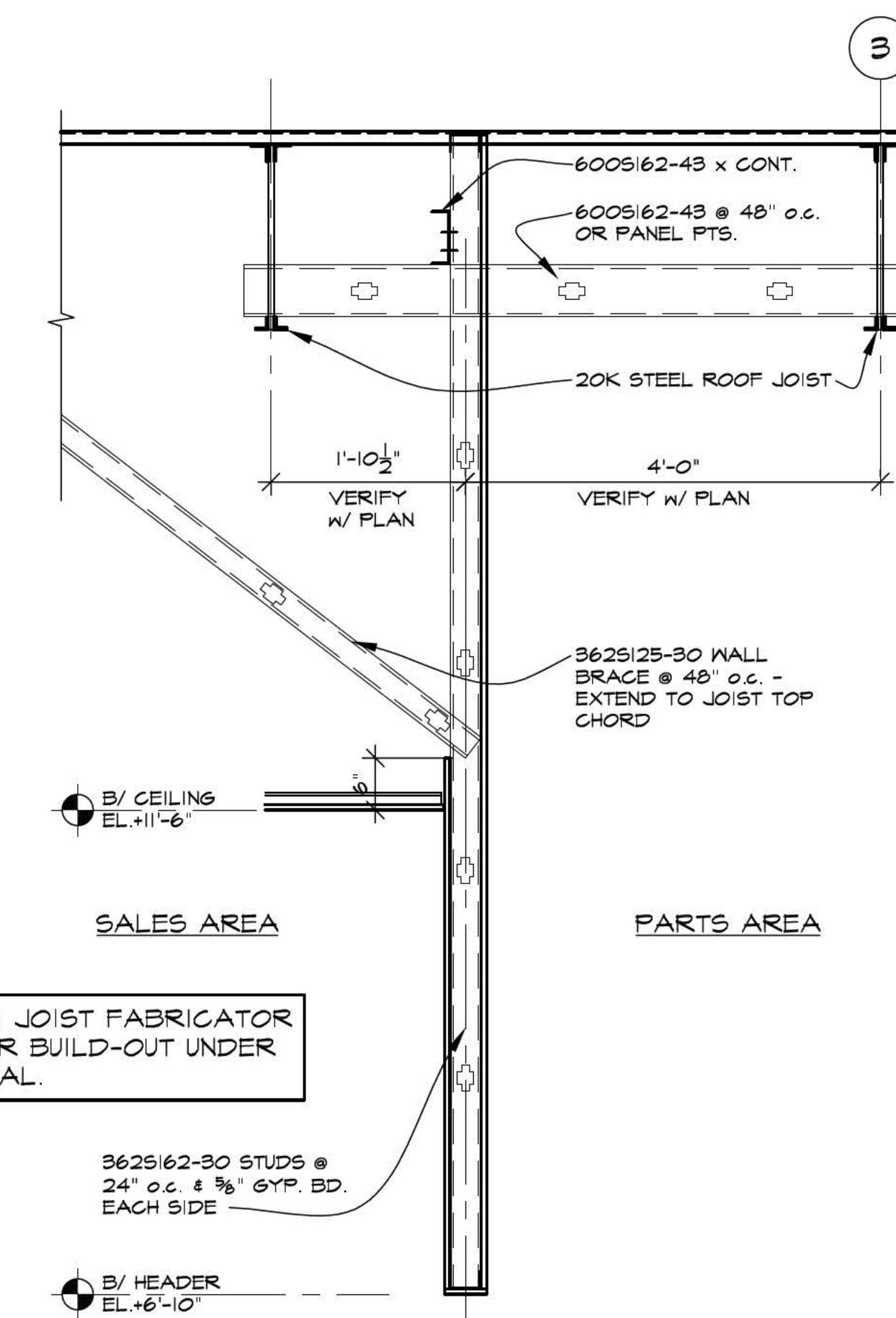
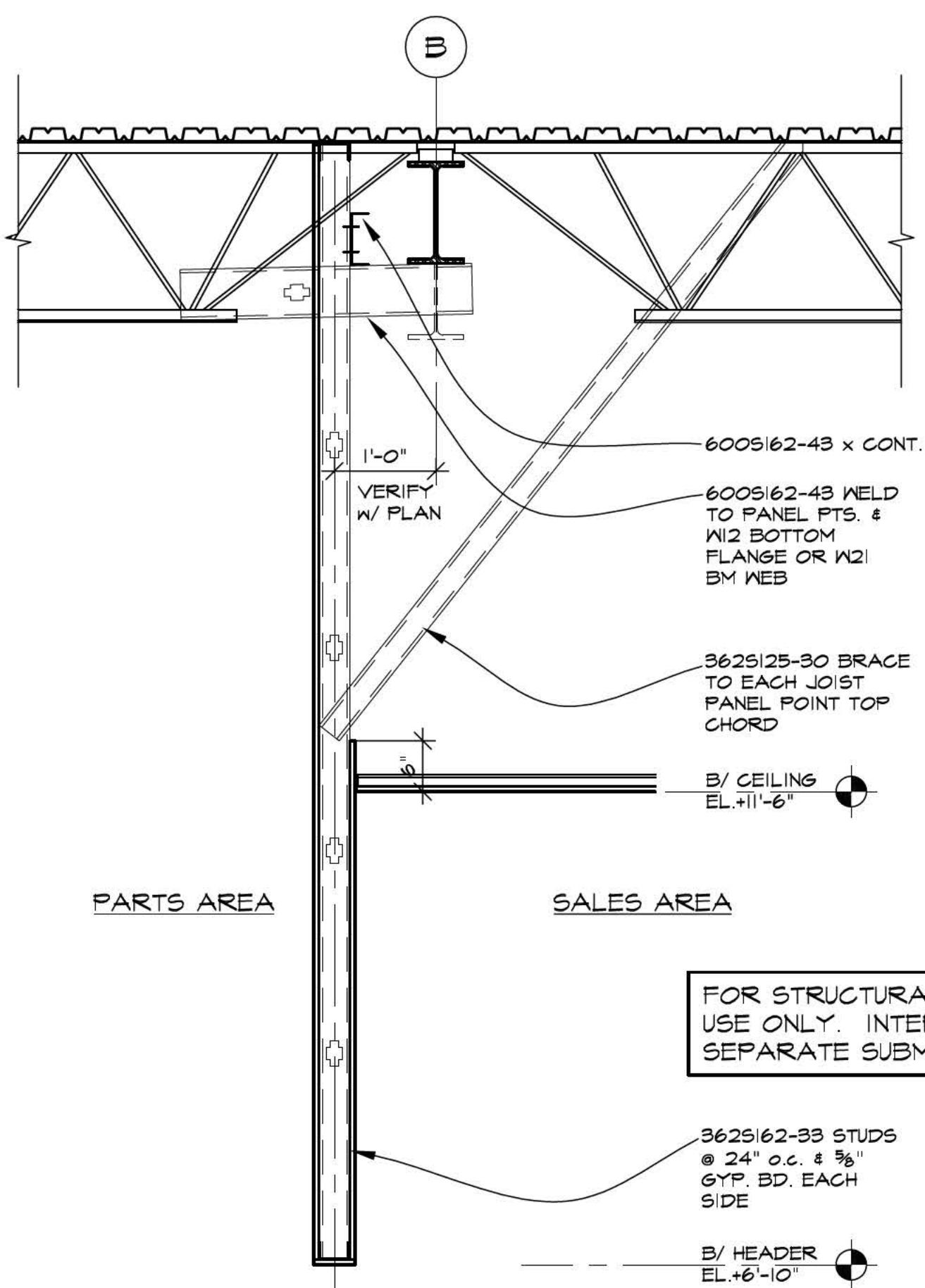
O'REILLY AUTO PARTS

DOLTON PLAZA

1317 E. SIBLEY BLVD. DOLTON, IL 60419
FOR: DEPARTMENT PROPERTY GROUP, LLC

1

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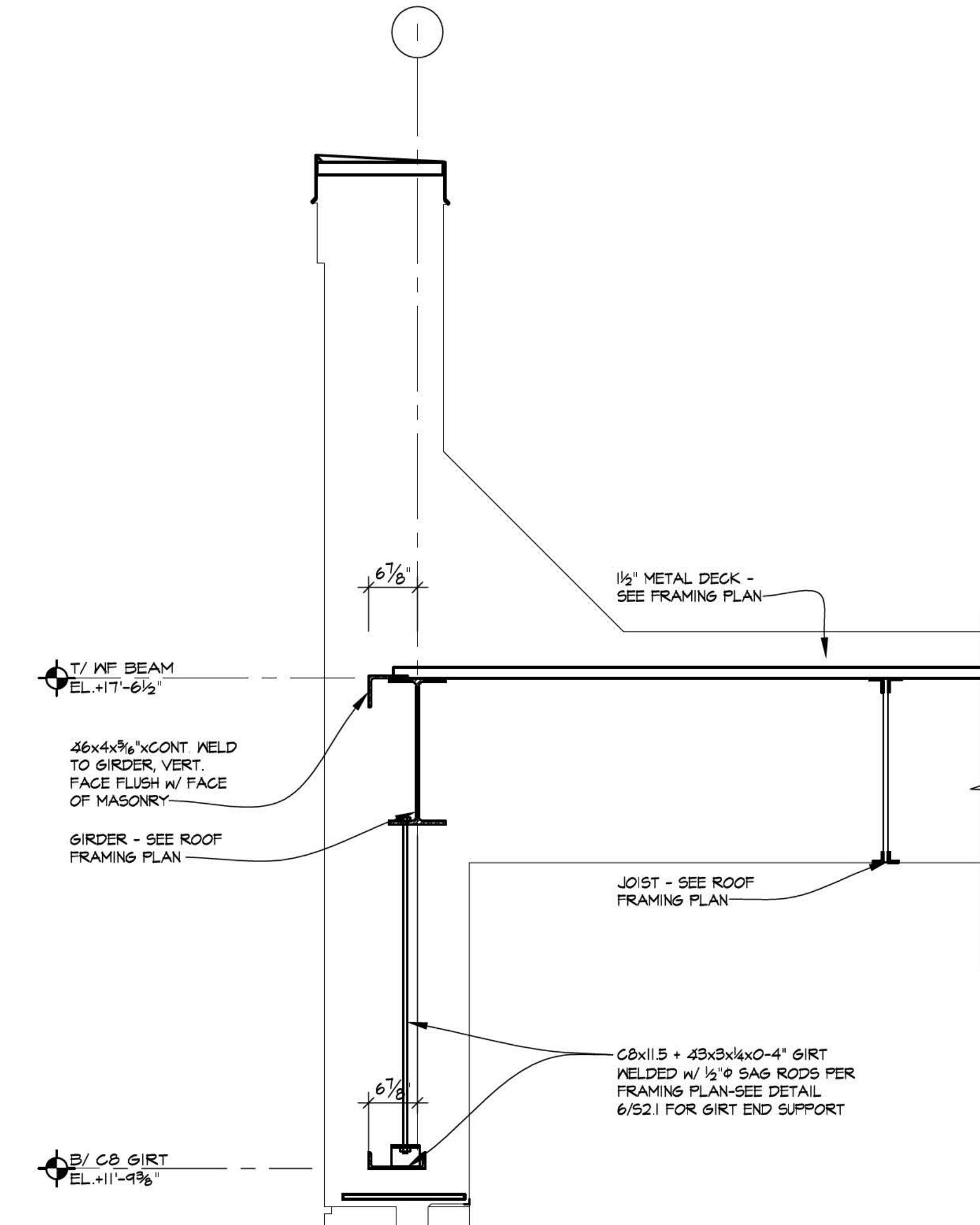
HEADWALL DETAIL

SCALE: 3/4" = 1'-0"

HEADWALL DETAIL

SCALE: 3/4" = 1'-0"

9



SCALE : 3/4" = 1'-0

7

2.1

PLUMBING FIXTURE SCHEDULE / ALL FIXTURES & FITTINGS MUST BE "LEAD FREE"

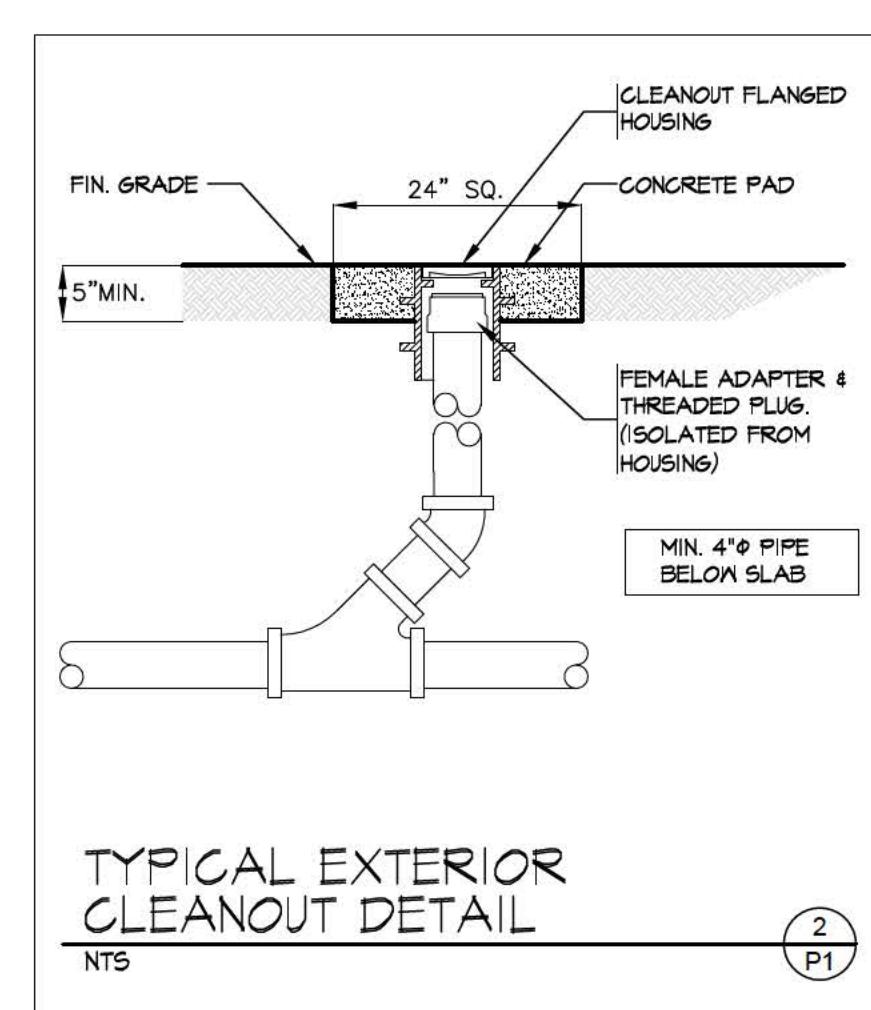
MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	ACCESSORIES	PIPING REQUIREMENTS			REMARKS	APPROVED MANUFACTURERS	CODE APPROVALS
					WASTE	VENT	SUPPLY			
F.D.	FLOOR DRAIN	ZURN	ZN415-B-P	1/2" TRAP PRIMER CONNECTION	2"	2"	—	COMBINATION WASTE VENT	WADE & ZURN	ASSE 1010-B
C.O.	CLEANOUT (INTERIOR)	JAY R. SMITH	4100	W/CARPET CLAMPING RING WHERE REQUIRED	SEE PLAN	—	—	SAME SIZE AS LINE	WADE & ZURN	—
C.O.I.	CLEANOUT (EXTERIOR)	JAY R. SMITH	4250	—	SEE PLAN	—	—	SAME SIZE AS LINE SEE DETAILS 2/P2 & 8/P2	WADE & ZURN	—

PLUMBING NOTES

- DRAWING IS DIAGRAMMATIC & IS NOT TO BE SCALED. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS.
 - ALL PLUMBING WORK IS TO BE DONE IN ACCORDANCE WITH THE APPLICABLE CODE(S) NOTED ON THE CODE SUMMARY SHEET.
 - VALVES ON WATER LINES SHALL BE BRONZE BALL VALVES. DO NOT SUBSTITUTE GATE OR GLOBE VALVES. VALVES SHALL BE THE SAME SIZE AS THEIR INLET PIPING (SPEC 20 05 00).
 - ALL PLUMBING FIXTURES ARE TO BE FURNISHED COMPLETE WITH NECESSARY STOPS, TRAPS, TAILPIECES, TRIM, ETC. (SPEC 22 40 00).
 - THE CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS & SUBCONTRACTORS IN LAYING HIS OUT & INSTALLING HIS WORK. COOPERATION DOES NOT MEAN "I WAS HERE FIRST".
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE & FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE INTENT OF THE PLANS, WHETHER OR NOT EVERY ELEMENT THEREOF IS SPECIFICALLY CALLED OUT.
- T-10 N/A
- CONTRACTOR SHALL COORDINATE WITH ALL STATE & LOCAL BUILDING REGULATION AGENCIES & UTILITY COMPANY(S) IN THE PROCUREMENT & PAYMENT OF ALL PERMITS, LICENSES, FEES & CHARGES REQUIRED FOR THE PERFORMANCE OF THE WORK.
- I-13 N/A
- ALL CAULKING ON BUILDING PENETRATIONS SHALL BE A 1-COMPONENT NON-SAG URETHANE SEALANT. ANY CONTRACTOR WHO USED SILICONE OR ANY OTHER CAULKING WILL BE REQUIRED TO REMOVE & REPLACE WITH A SPECIFIED SEALANT. (SPEC OT 92 00)
 - N/A
 - ALL GAS PIPING INSTALLATIONS SHALL COMPLY WITH "NFPA-54" NATURAL GAS OR "NFPA-58" LP GAS (latest edition).
 - N/A

PLUMBING PIPE MATERIALS

- A. THE FOLLOWING APPLICATIONS ARE FOR INSIDE, BELOW & ABOVE THE BUILDING SLAB AND ENDING AT A POINT 5'-0" OUTSIDE THE PERIMETER BUILDING WALLS.
- DOMESTIC WATER DISTRIBUTION PIPING BELOW GROUND: ALL INTERIOR DOMESTIC WATER PIPING SHALL BE TYPE "K" HARD DRAWN COPPER TUBING (SL-FOS 2, FOS-FLO 7 OR OTHER SILVER BRAZING MATERIAL). THIS IS REQUIRED FOR THE WATER SERVICE LINE (SEE SITE UTILITIES PLAN FOR WHICH PIPING MATERIAL (COPPER OR PVC) IS REQUIRED).
 - DOMESTIC WATER DISTRIBUTION PIPING ABOVE GROUND: HARD COPPER (TYPE K).
 - SOIL, WASTE, AND VENT PIPING BELOW GROUND: SCHEDULE 40 PVC PIPE (PVC) PLASTIC DWV PIPE.
 - SOIL, WASTE, AND VENT PIPING ABOVE GROUND: HUBLESS CAST-IRON SOIL PIPE OR PVC (PVC) PLASTIC DWV PIPE.
 - NOTE: PVC PIPING IS NOT PERMITTED IN AIR-HANDLING CEILING SPACES, USE ONLY CAST-IRON OR DUCTILE IRON PIPE IN THESE LOCATIONS.
- B. THE FOLLOWING APPLICATIONS ARE FOR ONLY FROM 5'-0" OUTSIDE THE BUILDING TO THE UTILITY POINT OF CONNECTION (POC).
- UNDERGROUND DOMESTIC WATER SERVICE PIPING FROM A POINT 5 FEET OUTSIDE THE BUILDING TO THE POC. (SEE SITE UTILITIES PLAN FOR WHICH PIPING MATERIAL (COPPER OR PVC) IS REQUIRED).
- 3/4" - 1 1/4" SCHEDULE 40 PVC PIPE WITH SOLVENT-WELDED JOINTS.
 - 1 1/2" - 3" SDR-21 PVC PIPE (ASTM D2241) CLASS 200, BELL AND SPIGOT WITH RUBBER GASKETED JOINTS.
 - 3 1/4" - 3" TYPE "K" HARD DRAWN COPPER TUBING (SL-FOS 2, FOS-FLO 7 OR OTHER SILVER BRAZING MATERIAL).
 - 4" AND LARGER SDR-16 PVC PIPE (AWWA C-900) CLASS 150 BELL AND SPIGOT WITH RUBBER GASKETED JOINTS.
- UNDERGROUND SANITARY SEWER SERVICE PIPING FROM A POINT 5 FEET OUTSIDE THE BUILDING TO THE POC.
- POLYVINYL CHLORIDE (PVC) SEWER PIPE SHALL CONFORM TO ASTM D2034 (SDR-35).
 - CAST IRON OR DUCTILE IRON PIPE SHALL CONFORM TO USASI #A-21 CLASS 50.
- C. GAS PIPE MATERIAL:
- LOW-PRESSURE GAS SYSTEMS, ABOVE GROUND WITHIN OR OUTSIDE BUILDING:
USE THE FOLLOWING:
- 2" AND SMALLER: STEEL PIPE, MALLEABLE-IRON, THREADED FITTINGS, AND THREADED JOINTS.
 - 2 1/2" AND LARGER: STEEL PIPE, BUTT-WELDING FITTINGS, AND WELDED JOINTS.



PIPING INSULATION NOTES

SCOPE:

FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID. PROVIDE PIPING INSULATION ON NEW AND EXISTING PIPING AS REQUIRED BY CONSTRUCTION DOCUMENTS. REPAIR OR REPLACE EXISTING PIPING INSULATION WITHIN PROJECT AREA AS REQUIRED.

PIPING INSULATION IS REQUIRED AT NEW AND EXISTING PLUMBING PIPING INCLUDING: ALL DOMESTIC HOT WATER, EXPOSED DOMESTIC COLD WATER, DOMESTIC COLD WATER AGAINST AN EXTERIOR WALL, HVAC PIPING & CONDENSATE LINES/DRAINS, INTERIOR HORIZONTAL AND VERTICAL ROOF DRAIN PIPING AND INTERIOR ROOF DRAIN BODY.

SPECIFICATIONS:

- ALL PIPING (ABOVE FINISHED FLOOR) SHALL BE COVERED WITH ARMACELL AP/ARMAFLEX PIPE INSULATION IN ACCORDANCE WITH ASTM C-554, GRADE I, TYPE I FOR TUBULAR MATERIALS AND GRADE I, TYPE II FOR SHEET MATERIAL. MINIMUM PIPE INSULATION THICKNESS (PER IECC TABLE C403.11.3) AS FOLLOWS:
- ALL JOINTS SHALL BE SEALED WITH APPROVED MANUFACTURER'S ADHESIVE.
- ACCEPTABLE ALTERNATE MANUFACTURER: AEROCEL (BY AEROFLEX INTERNATIONAL CO.) CLOSED CELL ELASTOMERIC THERMAL INSULATION.
- FIBERGLASS PIPE INSULATION, RIGID (NOT WRAP TYPE), ONE INCH THICK WITH BUILT-IN VAPOR BARRIER MAY BE USED IN LIEU OF ARMACELL PRODUCT SPECIFIED ON ALL PIPING EXCEPT HOT WATER 1 1/2" PIPE OR LARGER. ACCEPTABLE MANUFACTURERS ARE ARMSTRONG, CERTAINTEED, JOHNS-MANVILLE, KNAUF, AND OWENS-CORNING.
- FLAME SPREAD SHALL BE 25 OR LESS. SMOKE DEVELOPED SHALL BE 50 OR LESS.
- INSTALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

(POC).

UNDERGROUND DOMESTIC WATER SERVICE PIPING FROM A POINT 5 FEET OUTSIDE THE BUILDING TO THE POC.

(SEE SITE UTILITIES PLAN FOR WHICH PIPING MATERIAL (COPPER OR PVC) IS REQUIRED).

1. 3/4" - 1 1/4" SCHEDULE 40 PVC PIPE WITH SOLVENT-WELDED JOINTS.

2. 1 1/2" - 3" SDR-21 PVC PIPE (ASTM D2241) CLASS 200, BELL AND SPIGOT WITH RUBBER GASKETED JOINTS.

3. 3 1/4" - 3" TYPE "K" HARD DRAWN COPPER TUBING (SL-FOS 2, FOS-FLO 7 OR OTHER SILVER BRAZING MATERIAL).

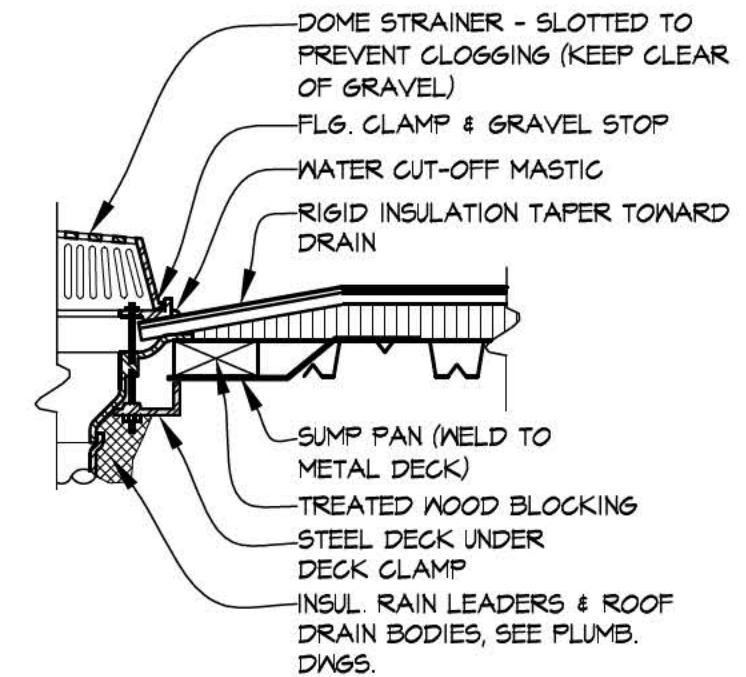
4. 4" AND LARGER SDR-16 PVC PIPE (AWWA C-900) CLASS 150 BELL AND SPIGOT WITH RUBBER GASKETED JOINTS.

UNDERGROUND SANITARY SEWER SERVICE PIPING FROM A POINT 5 FEET OUTSIDE THE BUILDING TO THE POC.

1. POLYVINYL CHLORIDE (PVC) SEWER PIPE SHALL CONFORM TO ASTM D2034 (SDR-35).

2. CAST IRON OR DUCTILE IRON PIPE SHALL CONFORM TO USASI #A-21 CLASS 50.

- C. GAS PIPE MATERIAL:
- LOW-PRESSURE GAS SYSTEMS, ABOVE GROUND WITHIN OR OUTSIDE BUILDING:
USE THE FOLLOWING:
- 2" AND SMALLER: STEEL PIPE, MALLEABLE-IRON, THREADED FITTINGS, AND THREADED JOINTS.
 - 2 1/2" AND LARGER: STEEL PIPE, BUTT-WELDING FITTINGS, AND WELDED JOINTS.



ROOF DRAIN
SCALE: 1/2"=1'-0"

A

WATER SERVICE DETAIL

NTS

1 P1

PLUMBING PLAN

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

N

1906

PLAN NOTES

- (1) SEE DETAILS ON THIS SHEET FOR ADDITIONAL INFORMATION.
- (2) DUCT DROPS ONLY. COIL UP T-STAT WIRE WITH STAT AT BAR JOISTS FOR FUTURE INSTALLATION.
- (3) FUTURE WALLS. INTERIOR BUILD OUT TO BE UNDER SEPARATE PERMIT.

REVISIONS

THIS DRAWING

NOT FOR COORDINATION

FOR BIDDING

NOT FOR PERMIT

NOT FOR CONTRACTING

NOT FOR CONSTRUCTION

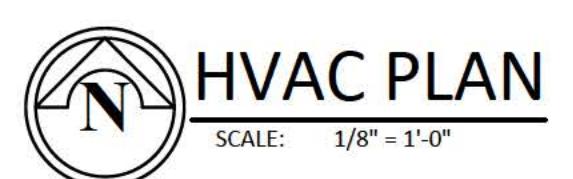
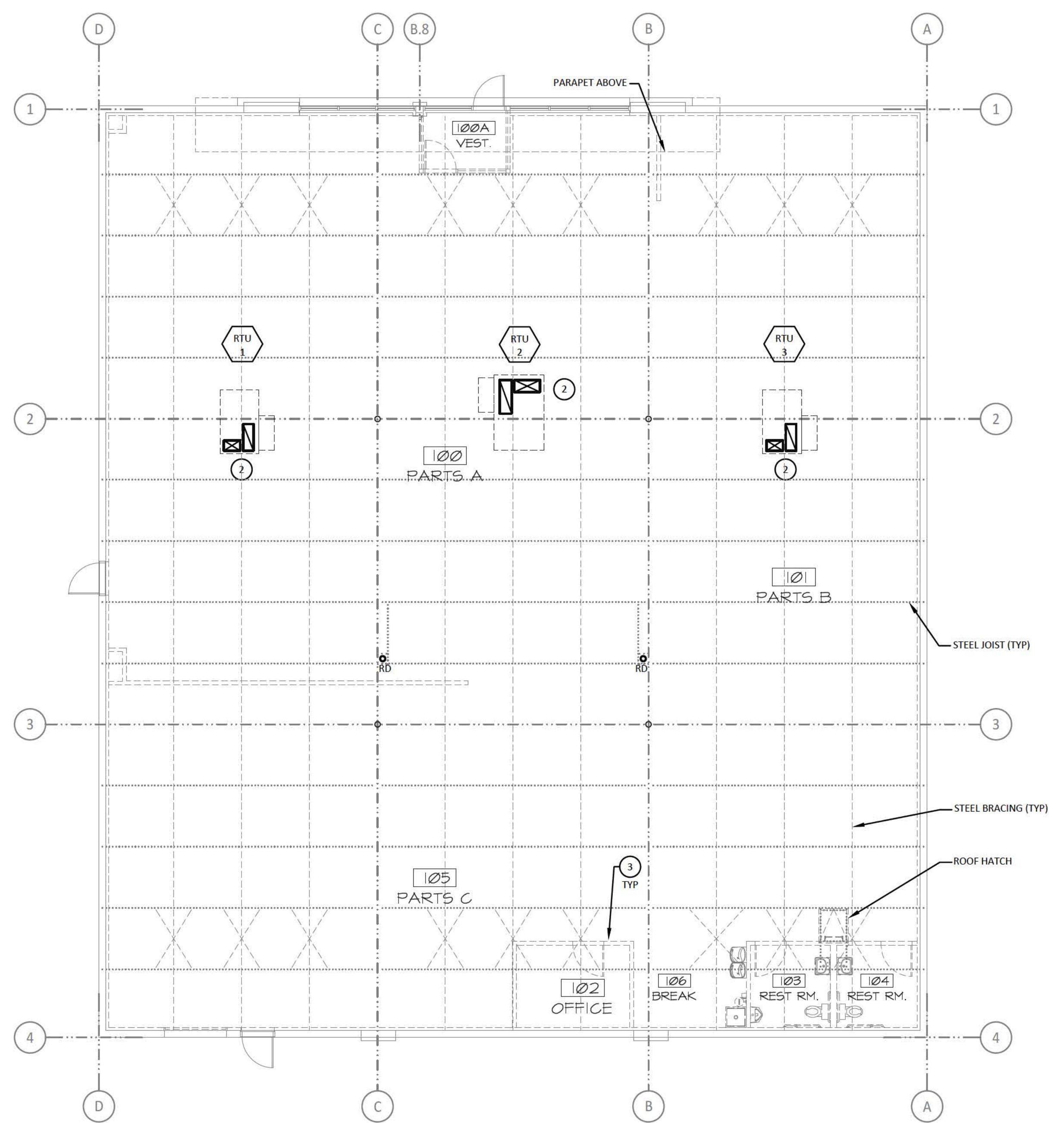
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FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE
HVAC PLAN

1906

M
1



HVAC PLAN

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

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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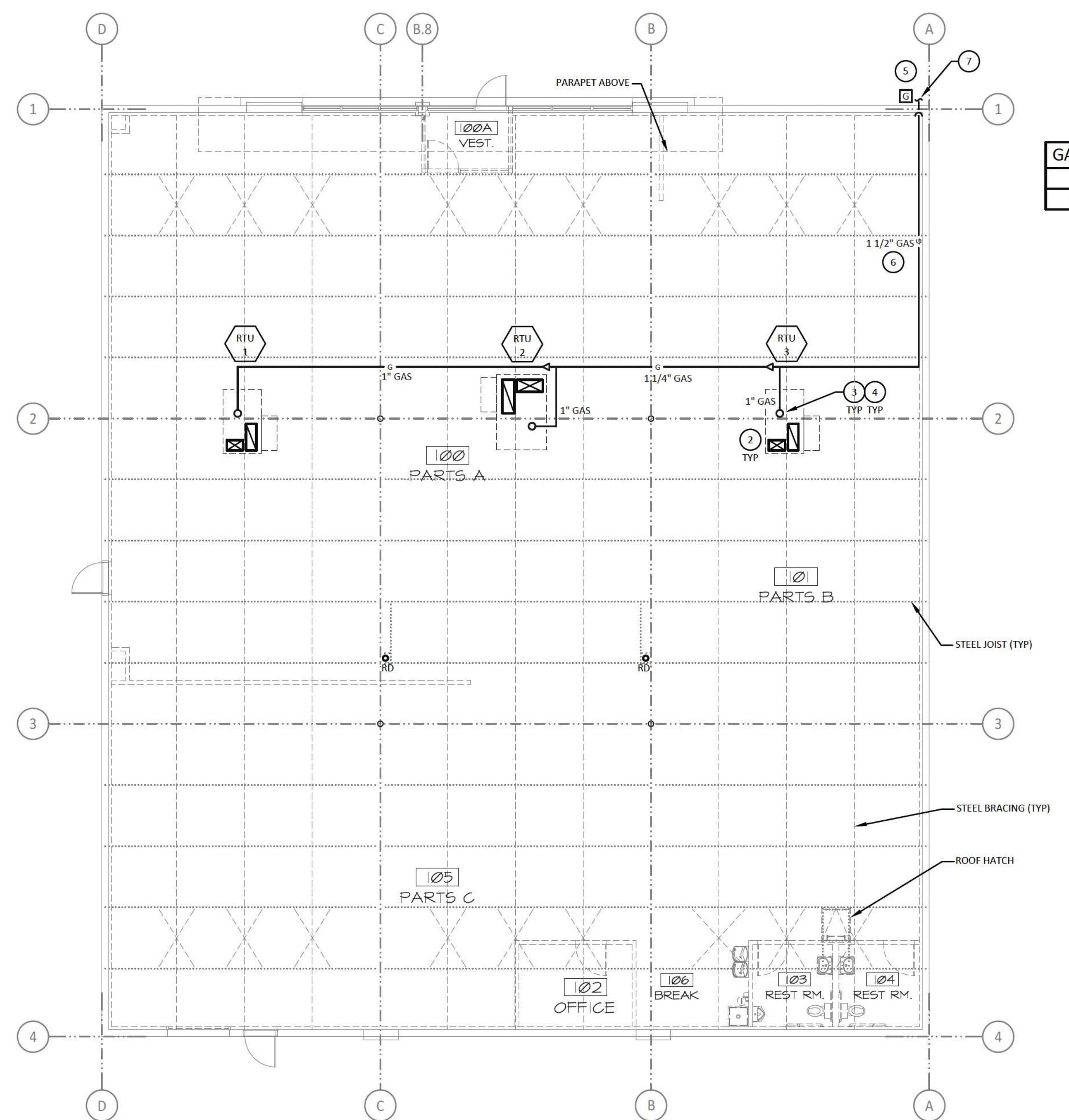
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SHEET TITLE
 GAS PIPING PLAN
 NO SCALE
 ID-1-11A

1906
 M
 2



GAS PIPING PLAN

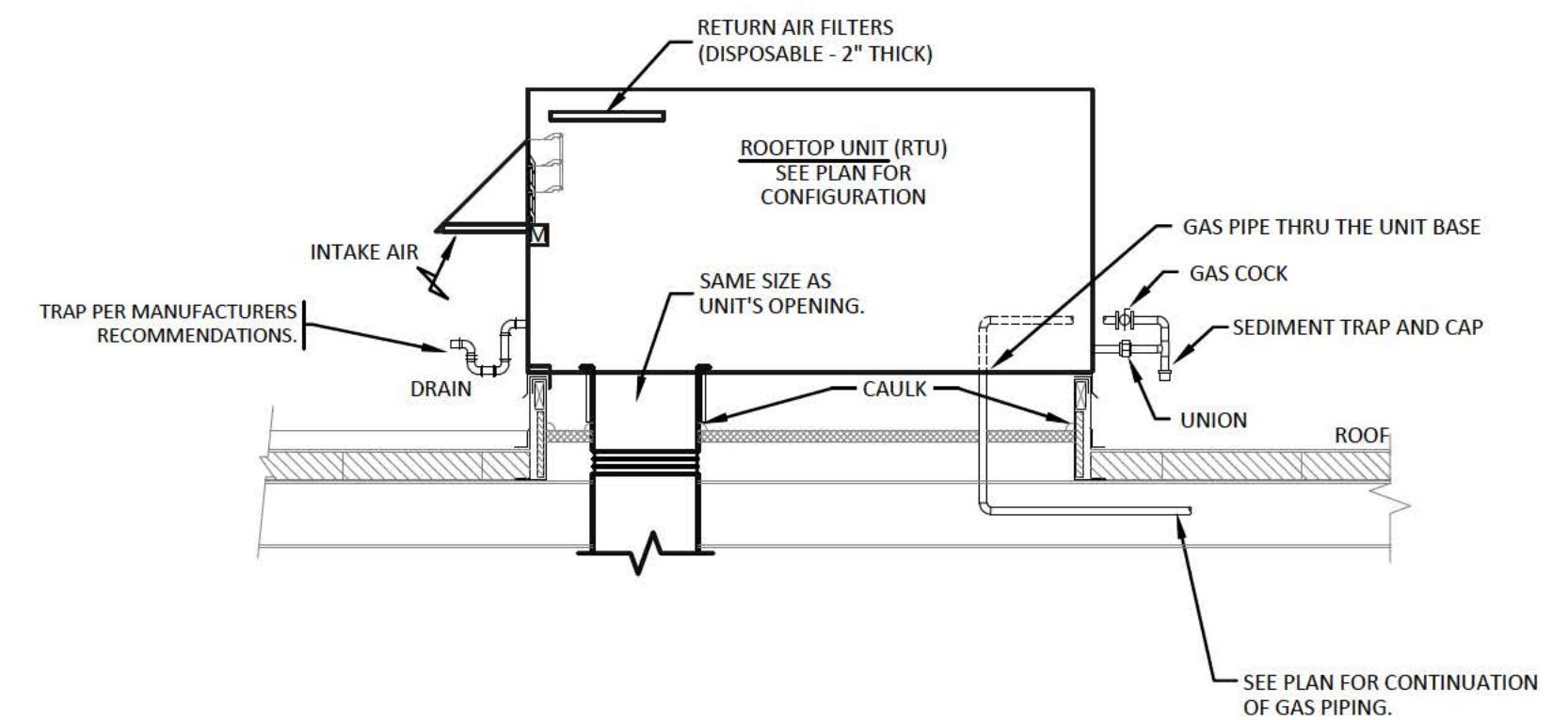
SCALE: 1/8" = 1'-0"

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PLAN NOTES

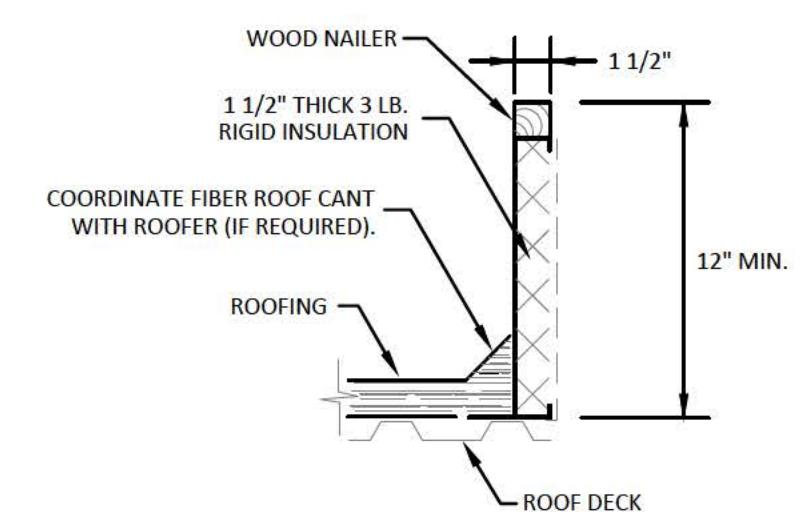
- ① SEE DETAILS ON THIS SHEET FOR ADDITIONAL INFORMATION.
- ② TYPICAL EQUIPMENT MOUNTED ON CURB. SEE ROOF CURB DETAIL #D-1-11A.
- ③ GAS PIPE UP IN CURB AND THRU UNIT BASE.
- ④ SEE GAS ROOF TOP UNIT DETAIL FOR GAS PIPING TRIM.
- ⑤ GAS METER LOCATION, COORDINATE METER SIZE AND LOCATION WITH GAS COMPANY. SEE GAS METER LOAD SCHEDULE.
- ⑥ RUN GAS PIPING BELOW ROOF. GAS PIPING TO BE INSTALLED ABOVE BOTTOM OF JOISTS WHEN POSSIBLE.
- ⑦ PAINT ALL EXTERIOR GAS PIPING TO MATCH COLOR OF EXTERIOR WALL.

TENANT	CFH	PRESSURE
100-RETAIL	480 (ALT)	6" W.C.



GAS ROOF TOP UNIT DETAIL

(LOW PRESSURE) GAS PIPE INSIDE



RPS CORPORATION, MODEL: RC-2 OR EQUAL

- * 18 GAUGE GALVANIZED STEEL
- * WOOD NAILER
- * UNITIZED CONSTRUCTION
- * SLOPED CURB AS REQUIRED FOR ROOF PITCH
- * INTERIOR LINING
- * DAMPER SHELF (IF REQUIRED)

ROOF CURB DETAIL

NO SCALE
 ID-1-11A

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STANDARD SYMBOLS LEGEND	
	EQUIPMENT TAG
	POINT OF NEW CONNECTION
	REVISION TAG
	PHOTO VIEW POINT
	SECTION/DETAIL IDENTIFIER
	COLUMN LINE TAG
	N.I.C.
	U.N.O.
	NOT IN CONTRACT
	UNLESS NOTED OTHERWISE

DUCTWORK SYMBOLS LEGEND	
	S/A DIFFUSER
	R/A DIFFUSER
	SLOT DIFFUSER
	FLEXIBLE DUCT
	SPIN COLLAR
	① THERMOSTAT
	⑤ REMOTE SENSOR
	⑥ VEHICLE EXHAUST SENSOR
	⑦ HUMIDISTAT
	⑧ CONTROL CABINET
	QUANTITY
	CFM
	NECK SIZE
	GRD MODEL TAG
	RADIUS = 1/2W
	NOTE: WHERE THIS RADIUS IS NOT POSSIBLE PROVIDE A FULL RADIUS VANE OR A SQUARE ELBOW WITH VANES (BELOW)
	OUTSIDE DUCT DIMENSION
	L-LINER
	W-WRAPPED
	U-UNINSULATED
	AaxBx(C)
	X-X"
	ELEVATION
	BOTTOM OF DUCT
	BOTTOM OF PIPE
	BOTTOM OF EQUIPMENT
	DO NOT INSTALL SQUARE THROAT ELBOWS UNDER ANY CONDITIONS
	DO NOT INSTALL SQUARE THROAT ELBOWS W/O VANES UNDER ANY CONDITIONS (U.N.O.)
	NO TRAILING EDGE SINGLE THICKNESS VANE

ROOFTOP UNIT SCHEDULE				
	TAG	RTU-1	RTU-2	RTU-3
LOCATION SERVING	SALES/STOCK	SALES/STOCK	STOCK	
MANUFACTURER	CARRIER	CARRIER	CARRIER	
MODEL	48HCR06	48HCS08	48HCR06	
TONS (NOMINAL)	5	7.5	5	
COOLING ENERGY EFFICIENCY	15.2 EER	12 EER	15.2 EER	
REFRIGERANT TYPE	R-410A	R-410A	R-410A	
SUPPLY FAN DATA	CFM	1,500	2,250	1,500
	ESP (DUCT ONLY)	0.75	0.75	0.75
	RPM	1173	759	1173
COOLING COIL DATA	BHP	0.81	0.86	0.81
	MBH	59	90	59
	EAT (DB/WB)	81.5/67	81.5/67	81.5/67
HEATING DATA (MIN. REQ'D)	COIL LAT (DB/WB)	54.5/54	54.5/53.5	54.5/54
	UNIT LAT (DB/WB)	56/55	55/54	56/55
	STAGES	1	2	1
HEATING DATA (ALTERNATE)	INPUT (MBH) (MAX)	115	125	115
	OUTPUT (MBH) (MAX)	93	103	93
	STAGES	2	2	2
ELECTRICAL DATA	MCA / MOPC	30/45	41/50	30/45
	VOLT	208	208	208
	PHASE	3	3	3
OUTDOOR AIR (CFM)		430	640	430
UNIT WEIGHT (LBS)		1,000	1,350	1,000
REMARKS / ACCESSORIES		1-19, 21	1-20, 21	1-19, 21

DIVISION 23 (HVAC)

1) GENERAL:

- JOB SPECIFICATIONS ARE AS FOLLOWS:
- CODE - CONTRACTOR TO LOCATE, REVIEW AND COMPLY WITH ALL LOCAL, STATE AND/OR NATIONAL CODES. CONTRACTOR TO SPECIFICALLY LOCATE, REVIEW AND COMPLY WITH ALL LOCAL CODE AMENDMENTS.
- WORKMANSHIP/WARRANTY - CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, MATERIALS, METHODS, TECHNIQUES, SEQUENCES AND DETAILS TO PERFORM ITS WORK. ALL MATERIALS, EQUIPMENT AND WORKMANSHIP, SHALL BE GUARANTEED FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE THE EQUIPMENT/SYSTEMS ARE PLACED INTO OPERATION AND ACCEPTED BY THE OWNER. WARRANTY TO INCLUDE LABOR & MATERIALS REQUIRED FOR WARRANTY ISSUES.
- EQUIPMENT MANUFACTURER INSTRUCTIONS - CONTRACTOR TO FOLLOW EQUIPMENT MANUFACTURER'S INSTALLATION, OPERATION AND MAINTENANCE (IOM) MANUALS FOR ALL NEW EQUIPMENT. EQUIPMENT MANUFACTURER'S IOM INSTRUCTIONS SUPERSEDE ANY CONFLICTS WITH THESE DRAWINGS.
- SCHEDULED EQUIPMENT - CONTRACTOR PRICING TO BE BASED ON THE SCHEDULED EQUIPMENT. SUBSTITUTIONS TO BE SUBMITTED AS DEDUCTS (OR ADDS) TO THE BASE CONTRACT ALONG WITH A DESCRIPTION OF THE DIFFERENCES. ALL SUBSTITUTIONS WILL REQUIRE THE CONTRACTOR TO SUBMIT EQUIPMENT DRAWINGS AND A DESCRIPTION OF THE DIFFERENCES. THE REVISED DRAWINGS TO INCLUDE (BUT NOT LIMITED TO) THE REVISED EQUIPMENT SPECIFICATION SCHEDULES, LOCATIONS, WEIGHTS, DUCTWORK, PIPING, WIRING, BREAKERS (ETC.). THE REVISED DRAWINGS TO SHOW THE ENTIRE SYSTEM AS THE SYSTEM WILL BE INSTALLED BY THE CONTRACTOR.
- SUBMITTALS - CONTRACTOR TO COORDINATE SUBMITTAL SCHEDULE WITH OWNER IMMEDIATELY AFTER ACCEPTANCE OF CONTRACT, AS SOON AS POSSIBLE BEFORE CONSTRUCTION. CONTRACTOR TO EMAIL NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING SUBMITTALS (INCLUDING ALL ACCESSORIES), NO NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING ITEMS ARE TO BE INSTALLED UNTIL SUBMITTED INFORMATION IS APPROVED.
- SHOP DRAWINGS - BEFORE INSTALLATION, PROVIDE 1/4" SCALE "SHOP DRAWINGS" FOR COORDINATION AND APPROVAL. "SHOP DRAWINGS" TO SHOW DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT. INSTALLATION TO START ONLY AFTER WRITTEN APPROVAL FROM ENGINEER. ALL CONTRACTOR PROVIDED DRAWINGS TO BE MADE WITH "AUTO CAD" DRAFTING SOFTWARE AND SUBMITTED IN BOTH AUTOCAD AND ADOBE DIGITAL FORMAT. [NOTE - DESIGN DRAWINGS, NOTES AND/OR ADDENDUMS ARE NOT TO BE COPIED OR REPRODUCED IN ANY WAY FOR USE AS CONTRACTOR SUBMITTED DRAWINGS.] PROVIDE (4) PAPER HARD COPIES OF SHOP DRAWINGS.
- AS BUILT DRAWINGS - UPON COMPLETION OF THE INSTALLATION WORK, PROVIDE AS BUILT CHANGES CLEARLY SHOWING THE FINAL DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT, ALL AS BUILT DRAWING CHANGES TO BE MADE WITH 'AUTO CAD' DRAFTING SOFTWARE AND SUBMITTED IN BOTH AUTOCAD AND ADOBE DIGITAL FORMAT. [NOTE - DESIGN DRAWINGS, NOTES AND/OR ADDENDUMS ARE NOT TO BE COPIED OR REPRODUCED IN ANY WAY FOR USE AS CONTRACTOR SUBMITTED DRAWINGS.]
- POST CONSTRUCTION DOCUMENTS - CONTRACTOR TO EMAIL A MICROSOFT WORDS FORMAT FOLDER INCLUDING ALL REQUIRED PROJECT CLOSE OUT DOCUMENTS, THE WINDOWS FORMAT FOLDER TO INCLUDE SUB-FOLDERS AND TO BE LABELLED AS PER BELOW. [ALSO PROVIDE (3) EXACT PRINTED COPIES IN SEPARATE HARD BINDERS.]

o TRADE NAME:

1. WARRANTY - WARRANTY LETTER INCLUDING THE AGREED UPON START DATE
2. EQUIPMENT - COMPLETE LIST OF MODEL NUMBERS AND SERIAL NUMBERS FOR EACH PIECE OF EQUIPMENT

3. IOM - INSTALLATION, OPERATION AND/OR MAINTENANCE (IOM) MANUALS. INCLUDE PARTS LIST FOR EACH PIECE OF EQUIPMENT
4. VENDORS LIST - LIST OF CONTACT INFORMATION INCLUDING CONTACT NAME, PHONE NUMBER AND EMAIL ADDRESS FOR EQUIPMENT.

5. AS BUILT DRAWING - AS BUILT DRAWING INCLUDING FINAL LOCATION FOR EACH PIECE OF EQUIPMENT
6. TEST & BALANCE REPORT - REPORT OF ALL FINAL TESTED AND BALANCED AIR AND WATER SYSTEMS. SEE DIVISION 23 NOTES.

- ACCESS DOORS - CONTRACTOR TO FURNISH AND INSTALL ACCESS DOORS AS REQUIRED. EACH TRADE TO COORDINATE WITH CARPENTRY CONTRACTOR THE LOCATION OF ACCESS DOORS IN ALL CEILINGS, SOFFITS AND WALLS FOR ACCESS TO EQUIPMENT, VALVES, FIRE DAMPERS, CLEAN OUTS, SWITCHES, CONTROLS, ETC.

- STRUCTURE PROTECTION - THE BUILDING OR STRUCTURE SHALL NOT BE WEAKENED BY THE INSTALLATION OF ANY NEW SYSTEMS. WHERE FLOORS, WALLS, CEILINGS OR ANY OTHER PORTION OF THE BUILDING OR STRUCTURE ARE REQUIRED TO BE ALTERED OR REPLACED IN THE PROCESS OF INSTALLING OR REPAIRING ANY SYSTEM, THE BUILDING OR STRUCTURE SHALL BE LEFT IN A SAFE STRUCTURAL CONDITION IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR NATIONAL CODES.

- FIRE RESISTANT ASSEMBLIES - PENETRATIONS OF WALL/FLOOR/CEILING ASSEMBLIES AND ASSEMBLIES REQUIRED TO HAVE A FIRE-RESISTANCE RATING SHALL BE PROTECTED IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR NATIONAL CODES.

- ACCESSIBILITY - MANUAL ACCESSIBLE ITEMS IN OCCUPIED SPACES (SUCH AS CONTROLS, THERMOSTATS, SWITCHES AND ELECTRICAL OUTLETS) TO BE LOCATED NO HIGHER THAN 48" AND NO LOWER THAN 15" PER THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. VERIFY LOCAL ACCESSIBILITY CODE REQUIREMENTS OVER AND ABOVE THE ADA REQUIREMENTS. COORDINATE FINAL MOUNTING HEIGHTS WITH OWNER.

2) GENERAL HVAC CONDITIONS:

- KEEP OUTSIDE AIR INTAKES A MINIMUM OF 10'-0" AWAY FROM CONTAMINANT SOURCES.
- KEEP B-VENTS A MINIMUM OF 3'-0" ABOVE ROOF PENETRATION AND/OR 2'-0" ABOVE ANY PART OF THE BUILDING WITHIN 10'-0". B-VENTS TO CLEAR COMBUSTIBLES BY 3".
- THERMOSTATS, SENSORS AND CONTROL PANELS FOR HVAC EQUIPMENT SHALL BE LOCATED IN ACCORDANCE WITH THE MECHANICAL PLANS. FURNISH AND INSTALL CLEAR LOCKING COVERS FOR ALL T-STATS. ALL COVERS TO BE KEYED THE SAME.
- PROVIDE ENGRAVED TAGS FOR ALL HVAC EQUIPMENT.
- PROVIDE FACTORY START UP FOR ALL EQUIPMENT.

3) HVAC CONDITIONS:

- MECHANICAL CONTRACTOR MUST CALL "CARRIER CORPORATION S/NATIONAL ACCOUNTS" DEPARTMENT FOR CONFIRMATION OF ORDERS ONLY! CUSTOMER SERVICE REP, MARIA CAMPANELLO. PH: 315-432-3946, Maria.campanello@carrier.utc.com or StrategicAccounts2@carrier.utc.com

4) ANCHORING, SUPPORT & ISOLATION (EQUIPMENT, PIPING & DUCTWORK):

- ANCHORING & SUPPORT:

- o ANCHOR ALL EQUIPMENT, DUCTWORK AND PIPING TO APPROVED STRUCTURES WITH UNLISTED AND FACTORY MUTUAL APPROVED ANCHORING AND SUPPORT SYSTEMS. APPROVED ANCHORING SYSTEMS INCLUDE CONCRETE DROP-IN ANCHORS, TOP CHORD MOUNTED C-CLAMPS AND TOP CHORD MOUNTED BEAM CLIP DUCTWORK STRAP HANGERS. APPROVED SUPPORT SYSTEMS INCLUDE MINIMUM 3/8" THREADED ROD, MINIMUM 1" 20 GAUGE SHEET METAL DUCT STRAPS, U-CHANNEL, ANGLE IRON AND/OR PIPE CLEVIS HANGERS. FOLLOW THE ABOVE REQUIREMENTS UNLESS NOTED OTHERWISE BY EQUIPMENT MANUFACTURER OR STAMPED STRUCTURAL SUPPORT DRAWINGS.

o EQUIPMENT VIBRATION ISOLATION:

- o FURNISH AND INSTALL VIBRATION ISOLATION TO PREVENT TRANSMISSION OF SOUND AND VIBRATION FROM MOTORIZED AND ROTATING EQUIPMENT TO THE BUILDING STRUCTURE. TYPICAL APPROVED VIBRATION ISOLATION PRODUCTS INCLUDE ISOLATION HANGERS, ISOLATION SPRINGS, ISOLATION PADS AND ISOLATION CURBS. PROVIDE THE ABOVE ISOLATION FOR ALL EQUIPMENT 1/2 HORSEPOWER OR GREATER OR AS PER THE MANUFACTURER'S RECOMMENDATIONS. FURNISH AND INSTALL ISOLATION CURBS AND FLEXIBLE PIPING CONNECTIONS ONLY AS SPECIFICALLY NOTED ON PLANS.

o PIPING SUPPORT:

- o PIPING TO BE SUPPORTED WITH CLEVIS HANGERS AND INSULATION PROTECTORS WHERE INSULATED. ALLOW FOR EXPANSION AND DO NOT DIRECTLY ATTACH PIPE BETWEEN ANY TWO FIXED STRUCTURES.
- o ROOF MOUNTED PIPING SUPPORT TO BE CLOSED CELL MEDIUM DENSITY POLYETHYLENE FOAM BLOCK PIPE PIER (TOLCO BY NIBCO OR EQUAL).
- o MAXIMUM PIPE SUPPORT SPACING SHALL BE AS FOLLOWS.
 - ♦ STEEL PIPE - 12' HORIZONTAL, 15' VERTICAL
 - ♦ COPPER PIPE - 12' HORIZONTAL, 15' VERTICAL
 - ♦ PVC PIPE - 4' HORIZONTAL, 10' VERTICAL (MID-STORY GUIDE)

o DUCTWORK SUPPORT:

- o DUCTWORK TO BE SUPPORTED IN ACCORDANCE WITH S.M.A.C.N.A. STANDARDS. MAXIMUM OF 12' O.C. SUPPORT INTERVALS.

7) SMOKE DETECTORS AND REMOTE TEST STATIONS:

- o SMOKE DETECTORS TO BE PROVIDED AS PER NFPA AND LOCAL CODES. SMOKE DETECTORS SHALL BE INSTALLED IN RETURN AIR SYSTEMS, WITH A DESIGN CAPACITY GREATER THAN 2000 CFM, IN THE RETURN AIR DUCT OR PLENUM UPSTREAM OF ANY FILTERS, EXHAUST AIR CONNECTIONS, OUTDOOR AIR CONNECTIONS OR DECONTAMINATION EQUIPMENT AND APPLIANCES. SAMPLING TUBES TO MATCH LONG DIMENSION OF DUCT PLENUM. DUCT SMOKE DETECTOR TO SHUT UNIT(S) DOWN UPON ALARM. SMOKE DETECTORS TO BE 4-WIRE PHOTOELECTRIC TYPE (SYSTEM SENSOR INNOVAIRFLEX SERIES OR EQUAL). REMOTE TEST STATIONS TO EQUAL TO EQUA TO EDWARDS SIGNALING PRODUCTS MODEL SD-TRK4. FINAL MAKE AND MODEL TO BE COORDINATED WITH SMOKE DETECTORS FOR ALL UNITS.

8) FIRE DAMPERS:

- FIRE DAMPERS TO BE PROVIDED AS PER NFPA AND LOCAL CODES. MINIMUM 18x18 ACCESS DOOR TO BE PROVIDED AT EVERY FIRE DAMPER NOT LOCATED DIRECTLY BEHIND A REMOVABLE GRILLE, REGISTER OR DIFFUSER. FIRE DAMPERS TO BE "B" STYLE, UL 555 LISTED, 1.5 HOUR DAMPERS (SAFE AIR DOWCO 150 SERIES OR EQUAL) UNLESS NOTED OTHERWISE.

9) TESTING & BALANCING:

- TEST AND BALANCE CONTRACTOR TO BE COMPLETELY INDEPENDENT OF THE MECHANICAL CONTRACTOR AND NOT TO BE A SUB TO THE MECHANICAL CONTRACTOR. BALANCE EQUIPMENT, GRILLE, REGISTER, DIFFUSER AND DUCTWORK TO FLOW RATES SHOWN IN THE PLANS AND INSTALL ALL NECESSARY VAVES, SHEAVES & BELTS AS REQUIRED. PROVIDED CONCRETE AND OTHER SURFACE SUBSTRATES, FREQUENCY DRIVES NOT TO BE RAISED ABOVE 50HZ FOR REASON UNAPPROVED BY THE ENGINEER. FINAL TEST AND BALANCE REPORT TO INCLUDE COMPUTED CFM/GPM/LBS PER HOUR, PRESSURES (FAN STATIC/PUMP HEAD), RPM (FAN/PUMP), MOTOR (RPM/VOLTS/PHASE/AMPS/POWER FACTOR). ALL TESTING AND BALANCING TO BE PERFORMED BY N.E.B.B. AND/OR A.A.B.C. CERTIFIED TECHNICIANS. PROVIDE "PDF" FORMAT AND (3) PAPER COPIES OF FINAL REPORT.

3) DUCTWORK:

- ALL DUCTWORK SHALL MEET S.M.A.C.N.A. STANDARDS AS LISTED IN THE INTERNATIONAL MECHANICAL CODE. DUCTWORK TO BE GALVANIZED SHEET METAL UNLESS NOTED OTHERWISE.
- ALL RECTANGULAR BRANCH DUCTS TO HAVE OPPOSED BLADE DAMPERS.

- ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC PLUS EMBEDDED FABRIC SYSTEMS, OR TAPE. TAPE AND MASTICS USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS.

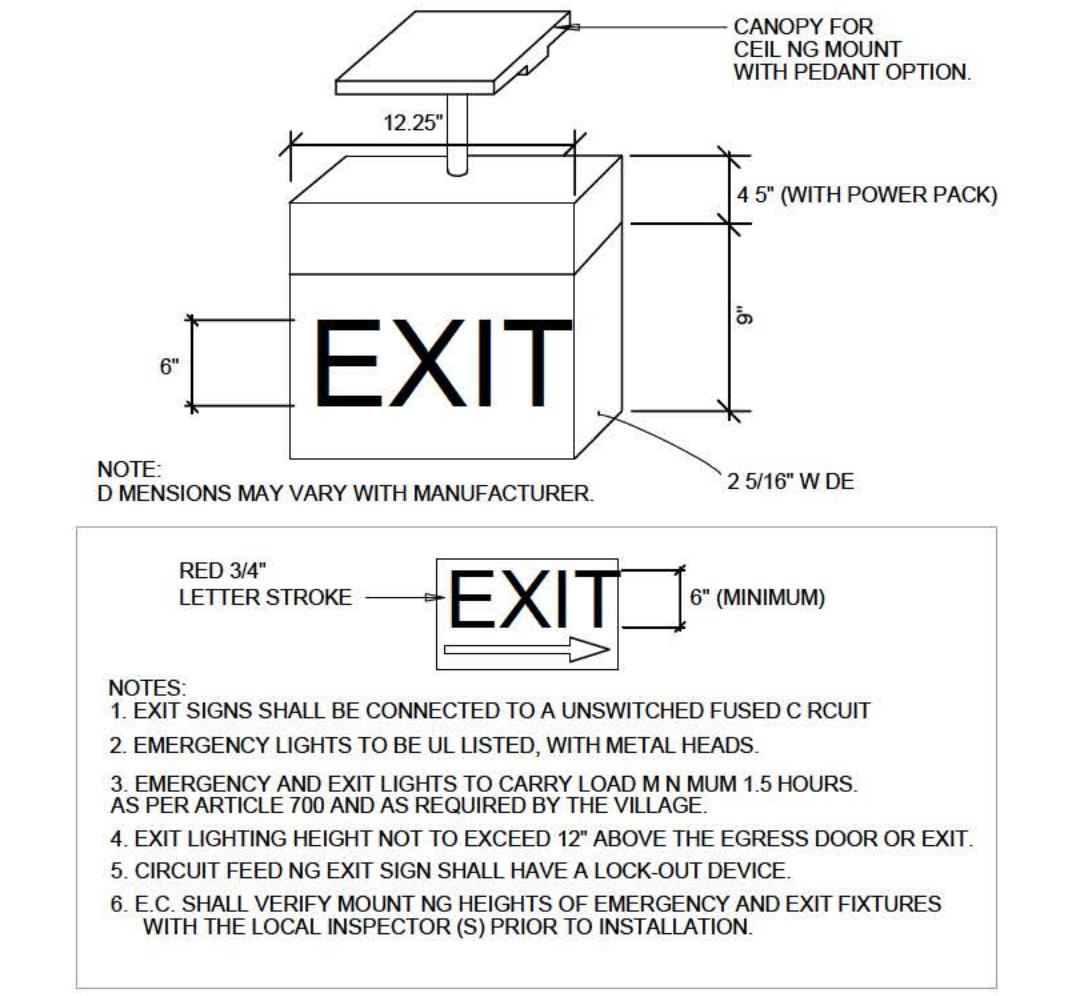
- LOW PRESSURE:
 - o RTU S/A & R/A DROPS - 2" LINER
 - o RECT. DUCT LENGTHS - 59" WITH S&D JOINTS
 - o DIMENSIONS - OUTSIDE DIMENSIONS SHOWN ON PLANS
 - o ELBO RADIUS - ONE HALF THE DUCT WIDTH (SEE DUCTWORK SYMBOLS LEGEND)
 - o SHOE-TAPS - 6" LONG

UNIT BATTERY EQUIPMENT NOTE:

1. ALL UNIT BATTERIES SHALL BE INSTALLED PER LOCAL AUTHORITY EM CODE AND IN COMPLIANCE WITH LOCAL INSPECTOR.
2. ALL UNIT BATTERIES SHALL BE LABELED AS EMERGENCY LIGHTING EQUIPMENT. INDIVIDUAL UNIT EQUIPMENT FOR CODE REQUIRED STANDBY EMERGENCY ILLUMINATION SHALL CONSIST OF:
 - A RECHARGEABLE BATTERY
 - A BATTERY CHARGING MEANS
 - PROVISIONS FOR ONE OR MORE LAMPS
 - A RELAY DEVICE TO AUTOMATICALLY ENERGIZE LAMPS UPON FAILURE OF THE SUPPLY TO THE UNIT EQUIPMENT
 - A TEST SWITCH
 - A PILOT LIGHT TO INDICATE SUPPLY FROM NORMAL SOURCE AND A PILOT LIGHT OR METER TO INDICATE THE BATTERY IS CHARGING. IT IS NOT PERMITTED FOR THIS PILOT LIGHT TO BE MARKED "READY" TO INDICATE POWER IS AVAILABLE.

UNIT EQUIPMENT SHALL BE PERMANENTLY FIXED IN PLACE AND SUPPLIED BY HARD WIRE.

THE BRANCH CIRCUIT FEEDING THE UNIT EQUIPMENT SHALL BE THE SAME BRANCH CIRCUIT AS THAT SERVING THE NIGHT LIGHTING ILLUMINATION IN THE AREA.

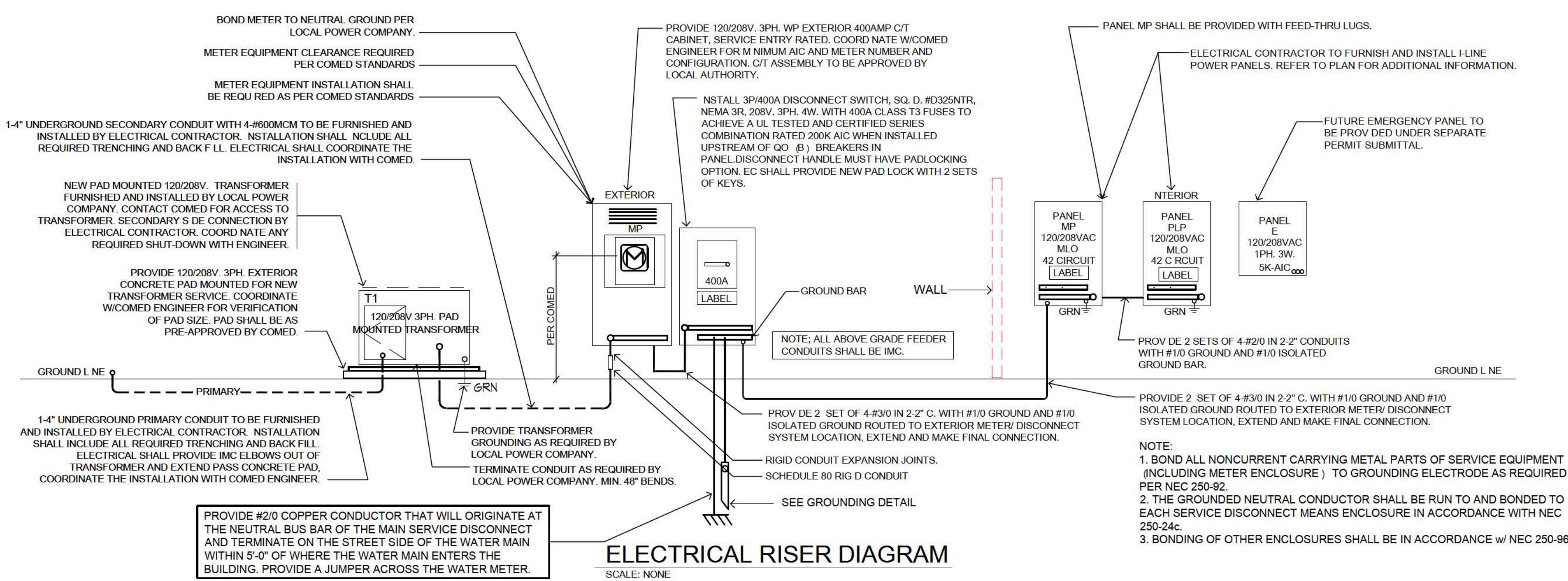


GENERAL NOTES

- A. LIGHTING AND EQUIPMENT BRANCH CIRCUIT BREAKERS SHALL BE SERIES RATED WITH REMOTE MAIN BREAKERS ALL IN ACCORDANCE WITH UL 489.
 - B. PANELBOARD COMPONENTS INCLUDING OVERCURRENT PROTECTION DEVICES SHALL BE FULLY RATED FOR THE AVAILABLE FAULT CURRENT, ELECTRICAL SHALL VERIFY AVAILABLE FAULT CURRENT WITH LOCAL POWER COMPANY ENGINEER.
 - C. PER LOCAL AUTHORITY, PROVIDE IDENTIFICATION AT ENCLOSURE OF PANELBOARDS WHERE BREAKERS ARE APPLIED IN SERIES COMBINATION, STATING: "CAUTION SERIES RATED SYSTEM. _____ AMPS AVAILABLE. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED." CONTRACTOR TO FILL IN BLANK WITH AVAILABLE FAULT CURRENT AS PROVIDED BY POWER COMPANY.
 - D. PER LOCAL AUTHORITY, PROVIDE IDENTIFICATION AT EACH DISCONNECTING MEANS FEEDING DOWNSTREAM DEVICES APPLIED IN SERIES COMBINATION, STATING: "CAUTION -SERIES RATED DEVICES ARE FEED FROM THIS REMOTE MAIN. _____ AMPS AVAILABLE. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED." CONTRACTOR TO FILL IN BLANK WITH AVAILABLE FAULT CURRENT AS PROVIDED BY POWER COMPANY.
 - E. NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER AND THE ELECTRICAL INSPECTOR.
 - F. A.I.C. RATING SHOWN AT PANELBOARD IS THE MINIMUM RATING FOR OVERCURRENT PROTECTION DEVICES. EACH DEVICE SHALL BE FULLY RATED OR SERIES RATED WITH UPSTREAM DEVICES AT AFC AS SHOWN ON PANEL SCHEDULES.
 - G. ELECTRICAL BOXES AND/OR CONDUIT INSTALLED IN SUSPENDED CEILINGS SHALL NOT EXCEED 100 CUBIC INCHES IN SIZE, AND THEY SHALL EITHER BE FASTENED TO THE FRAME MEMBERS BY BOLTS, SCREWS, RIVETS, OR APPROVED CLIPS, OR SECURED TO THE CEILING SUPPORT.

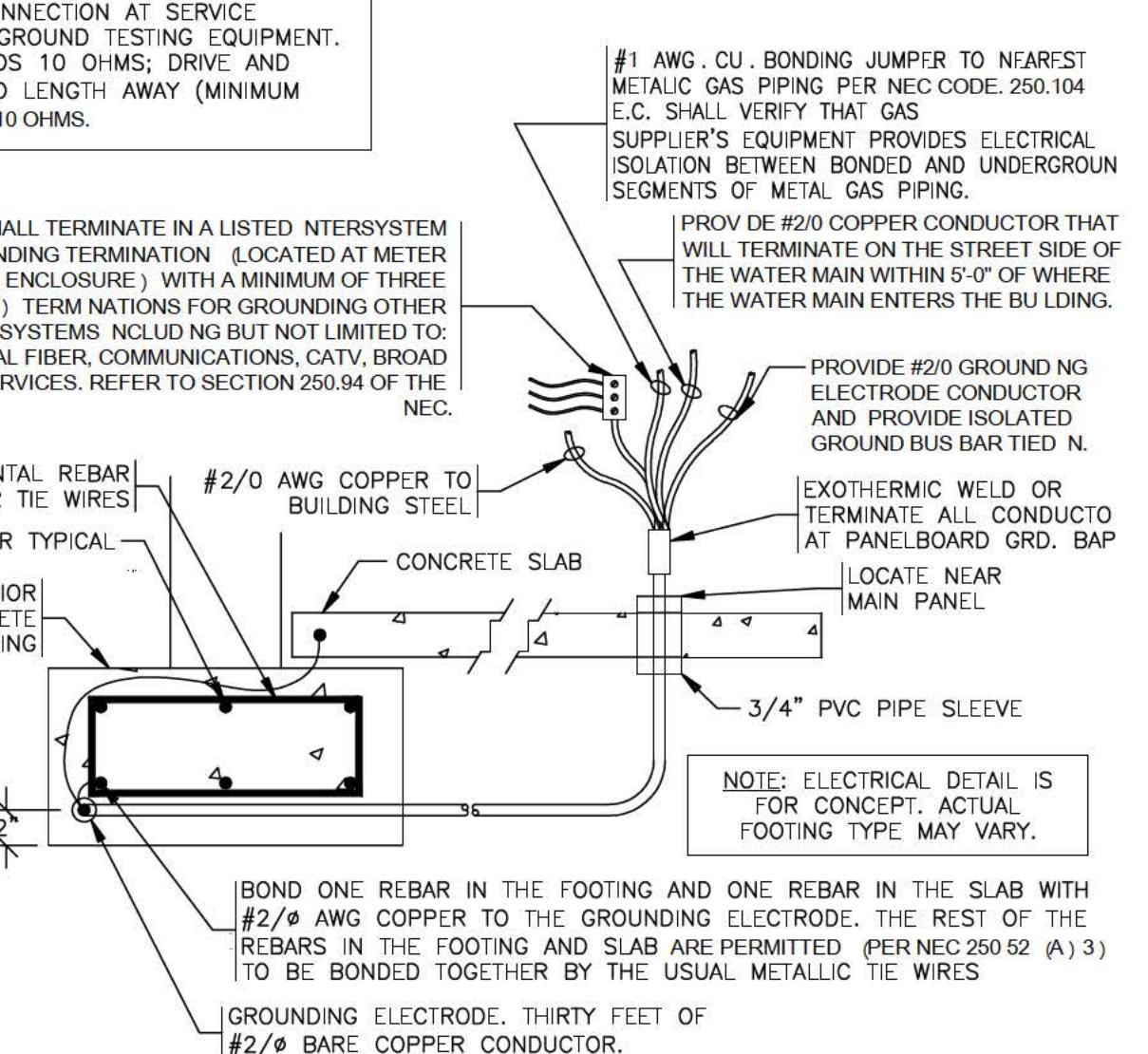
ELECTRICAL BIDDERS NOTES:

- A. EXISTING CONDITIONS SHALL BE VERIFIED IN FIELD BEFORE SUBMITTING BID. CONTRACTOR SHALL ADJUST FOR ACTUAL FIELD CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
POWER.
 - B. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL TRADES WORK PRIOR TO BIDDING AND START OF WORK. CONTRACTOR IS RESPONSIBLE TO COORDINATE AS REQUIRED FOR INSTALLATION OF NEW WORK AND IN COMPLIANCE WITH NEC CODES.
 - C. MAINTAIN CONTINUITY OF ALL NEW CIRCUITS AS NEEDED TO PROVIDE POWER/LIGHTING TO DEVICES BEING USED AS TEMPORARY
 - D. SEE ADDITIONAL SHEETS FROM CIVIL/ARCHITECTURAL MECHANICAL PLANS AND COORDINATION WITH NEW WORK REQUIRED UNDER BASE BID.
 - E. PROVIDE CADDY ADJUSTABLE FAR SIDE SUPPORTS OR EQUIVALENT ON ALL ELECTRICAL BOXES IN THE WALLS TO ASSURE TIGHT FITTING, SECURE BOXES. SECTION 21.107(A)(8).
 - F. ALL ELECTRICAL WORK SHALL COMPLY WITH ADOPTED AMENDMENTS OF THE LOCAL AUTHORITY AND THE NATIONAL ELECTRICAL CODE.
 - G. THE USE OF ALUMINUM SHALL NOT BE ACCEPTED IN ANY FORM.
 - H. CONDUIT RUN UNDER THE ROOF SHALL COMPLY WITH NEC 300.14 (E).
 - I. GARVIN COVER OUTLETS SHALL HAVE A BONDING JUMPER INSTALLED TO BOX.
 - J. MOGUL L.B. SHALL BE USED FOR ALL CONDUCTORS LARGER THAN #8.
 - K. NO TANDEM, BUDDY, DUPLEX, PIGGYBACK CIRCUIT BREAKERS.
 - L. ALL CONDUIT SYSTEMS AND RACEWAYS AND ETC. SHALL HAVE A GREEN GROUNDING CONDUCTOR PER NEC 250.122.
 - M. FLEXIBLE METAL CONDUIT, TYPE FMC, IS PERMITTED ONLY FOR INDOOR USE AND LIMITED TO A MAXIMUM OF 6'-0" IN LENGTH.
 - N. WIRE TERMINATED ON RECEPTACLES OR SWITCHES SHALL BE UNDER THE SCREW OF DEVICE. BACKSTABBING NOT ALLOWED.
 - O. ALL VOLTAGE OVER 24 VOLTS SHALL BE IN CONDUIT WHERE NOT ACCESSIBLE



Fixture Schedule/ Installation General Noting:

- 1 Furnish and install complete systems, including lighting fixtures lamps, switches, mounting facilities, wiring control equipment and other required accessories.
 - 2 The fixture catalog numbers listed on the schedule indicate the manufacturer, fixture design, appearance and performance desired. Verify the ceiling system and coordinate the lighting fixture trim and support requirements. These fixtures shall be modified as necessary to comply with the drawing and specification requirements.
 - 3 Fixtures shall bear the UL label and shall be wired and installed in full compliance with all applicable codes.
 - 4 All fluorescent fixtures shall have energy saving ballasts and lamps.
 - 5 All exit signs and battery operated emergency lighting units shall be modified as required for local code requirements.
 - 6 Verify all fixture locations before roughing-in.
 - 7 Where air handling fixtures are shown, they shall be furnished and installed in coordination with the mechanical trades.
 - 8 Fixtures intended to be installed in air plenums are to be approved for such installation. Coordinate with the mechanical drawings and specifications.
 - 9 Not used.
 - 10 Lighting fixtures and raceways shall be installed per local code, Means of Support.
 - 11 All cable routed in ceiling to be neatly attached to cable hangers attached to building, not the ceiling.
 - 12 Emergency lighting and exit signs shall be battery back-up type. Said equipment shall be spaced and located throughout all occupied spaces to meet applicable codes and are subject to the approval of the Fire Protection District of authority. In the event of a power supply failure, the exit signs and emergency means of egress lighting shall provide power for a duration of not less than 90 minutes.
 - 13 The wattage for screw lamp holders shall be the maximum labeled wattage of the luminaires per IECC 505.1.1
 - 14 The wattage for Low-Voltage Lighting shall be the specified wattage of the transformer supplying the system per IECC 505.5.1.2



GROUNDING DETAIL

SCALE: NONE

INSTALLATION NOTES:

1. PROVIDE A METAL IDENTIFICATION IS INSTALLED WHERE THE GROUNDING CONDUCTOR IS CONNECTED TO THE GROUND ELECTRODE WITH A APPROVED GROUND STRAP. PROVIDE TAG AND OR STRAP AS REQUIRED UNDER BASE BID. ALL GROUNDING ELECTRICAL CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING OR RIGID HEAVY WALL CONDUIT.
2. PROVIDE A JUMPER ACROSS THE WATER MAIN PER LOCAL REQUIREMENTS. PROVIDE AS REQUIRED UNDER BASE BID.
3. BONDING BUSHINGS SHALL BE INSTALLED ON ALL SERVICES.
4. FURNISH AND INSTALL NEW POWER PANEL BRANCH SERVICE FEEDERS AS NOTED ON PLANS. FEEDERS SHALL BE INSTALLED IN COMPLIANCE WITH THE LOCAL AUTHORITY. EXTEND TO BREAKERS AS REQUIRED. ALL VOLTAGE OVER 24 MUST BE INSTALLED IN CONDUIT.
5. VERIFY AND MAINTAIN A MINIMUM OF 36" CLEAR IN FRONT AND AND EXTENDING THE WITH OF THE PANEL OR 30" HORIZONTALLY. ALL PER THE LOCAL AUTHORITY.
6. ALL POWER CIRCUITS SHALL BE IN EMT CONDUIT, UNLESS OTHERWISE NOTED. NO MORE THAN 6 RECEPTACLES ON ANY NEW CIRCUIT OR AS NOTED ON PLANS. CIRCUITS SHALL NOT SHARE A NEUTRAL. EC SHALL ADJUST FEEDER AS REQUIRED.
7. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE PROPER GROUNDING THROUGH SEALTIGHT OR FLEX TO POWER PANEL GROUNDING CONDUCTOR (E.G.C.)
8. PANEL CIRCUIT NUMBER AND OR HOMERUNS SHOWN ARE INTENDED TO BE A COMPLETED OPERATIONAL CIRCUIT. EXTEND CIRCUIT TO ASSOCIATED PANEL AND MAKE FINAL CONNECTION AS REQUIRED. ELECTRICAL SHALL VERIFY FIELD CONDITIONS AND INCLUDE IN THERE BID.
11. EMERGENCY LIGHTING SHALL BE BATTERY BACK-UP TYPE. SAID EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY EC. PROVIDE ALL REQUIRED WIRE CIRCUIT/ CONTROL FEEDERS. BATTERY BACKUP SHALL BE CAPABLE OF CARRYING THE LOAD FOR 90 MINUTES. EXIT AND EMERGENCY LIGHTING SHALL BE VERIFIED IN FIELD TO COMPLY WITH LOCAL AUTHORITY.
11. ANY AND ALL RESPONSIBILITY CONFLICTS NOTED WITHIN THE ELECTRICAL PLANS AND SPECIFICATION SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL THE GREATER OF THE CONFLICTS AND SHALL BE INCLUDED IN THE BASE BID PRICE.

ELECTRICAL ABBREVIATIONS	
AMP, AMPERE	KWH KILOWATT-HOUR
ALTERNATING CURRENT	LRA LOCKED ROTOR AMPS
ABOVE FINISHED FLOOR	LTG LIGHTING
AMPERE INTERRUPTING	MCA MINIMUM CIRCUIT AMPAC
CURRENT	MCB MAIN CIRCUIT BREAKER
AMERICAN WIRE GAUGE	MH METAL HAL DE
CONDUIT	MLO MAIN LUGS ONLY
CIRCUIT	NEC NATIONAL ELECTRICAL CODE
CEILING UNIT HEATER	NEMA NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
DIRECT CURRENT	OC ON CENTER
EXHAUST FAN	PH PHASE
ELECTRIC WATER HEATER	RLA RUNNING LOAD AMPS
GROUND FAULT CIRCUIT	RTU ROOFTOP UNIT
INTERRUPTER	TYP TYPICAL
GROUND	V VOLT
HIGH INTENSITY DISCHARGE	VA VOLT-AMPERE
HORSEPOWER	W WATT
ISOLATED GROUND	WP WEATHERPROOF
JUNCTION BOX	XFMR TRANSFORMER
1000 CIRCULAR MILS	
KILOVOLT	
KILOVOLT-AMPS	
KILOWATT	

ELECTRICAL LEGEND

F	RECESSED MOUNTED FLUORESCENT LIGHTING FIXTURE, LETTER DENOTES TYPE, NUMBER DENOTES CIRCUIT
	CEILING MOUNTED INCANDESCENT OR HID LIGHTING FIXTURE
	EXIT LIGHT
	20A, 120/277V, SINGLE POLE TOGGLE SWITCH, "3" INDICATES 3 WAY, "P" INDICATES PILOT LIGHT, "M" INDICATES MOTOR RATED, "OS" INDICATES OCCUPANCY SENSOR (HUBBELL #AT1277W1). MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED. DEVICE AND COVERPLATE TO BE IVORY.
	SWITCHBOARD OR PANELBOARD
	LOW VOLTAGE CONTROL TRANSFORMER
	J-BOX - WALL, CEILING
	20 A, 125V, 2P, 3W GROUNDING DUPLEX WALL RECEPTACLE "GFI" INDICATES GROUND FAULT INTERRUPTING, "WP" INDICATES WEATHER PROOF, "IG" INDICATES ISOLATED GROUND. DEVICES AND COVERPLATE SHALL BE IVORY.
	20A, 125V DOUBLE DUPLEX RECEPTACLE, DEVICES AND COVERPLATE (IVORY), 15A NOT ACCEPTABLE
	20A, 125V QUAD RECEPTACLE, DEVICES AND COVERPLATE (IVORY), 15A NOT ACCEPTABLE
	DEDICATED RECEPTACLE DIRECT TO CIRCUIT BREAKER 20AMP-125V. (NEMA 15-5) GROUNDING TYPE DUPLEX RECEPTACLE, FLUSH MOUNTED 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
	MOTOR - HORSEPOWER, VOLTAGE AND PHASE AS NOTED ON DRAWINGS
	DISCONNECT SWITCH - SIZE AS NOTED ON DRAWINGS. (RATING/POLES/FUSE SIZE, "NF" INDICATES NON FUSED DISCONNECT)
	MAGNETIC MOTOR STARTER - SIZE AS NOTED ON DRAWINGS
	DOOR BUZZER/TRANSFORMER - EDWARDS CATALOG NUMBER 725/598 ON SINGLE GANG SURFACE BOX
	WEATHERPROOF PUSHBUTTON STATION - EDWARDS CATALOG NUMBER 1786-B
	CONDUIT - CONCEALED ABOVE CEILINGS, IN WALLS IN FINISHED AREAS, OR EXPOSED IN UNFINISHED AREAS.
	CONDUIT - IN OR BELOW FLOOR SLAB OR BELOW FINISHED GRADE
	CONDUIT HOMERUN TO PANEL - #12 OR SIZE AS INDICATED (GROUND NOT SHOWN BUT REQUIRED). UNLESS OTHERWISE NOTED, 2-#12,1-#12 G
	TELEPHONE OUTLET. PROVIDE 4"X4" BOX, PLASTER RING AND 1" CONDUIT TO ROOF JOIST SPACE.
	DATA, TIME/ATTENDANCE OUTLET. PROVIDE 4"X4" BOX, PLASTER RING AND 1" CONDUIT TO ROOF JOIST SPACE
	TEMPERATURE SENSOR, HONEYWELL TB8220 COMMERCIAL VISIONPRO MOUNTED AT 60" AFF. BY ELECTRICAL
	DUCT SMOKE DETECTOR

O'REILLY AUTO PARTS
DOLTON PLAZA
3117 E. SIBLEY BLVD. DOLTON, IL 60419
OR: DEPARTMENT PROPERTY GROUP, LLC

THIS DRAWING		REVISIONS	
NOT	FOR COORDINATION	NOT	1/1/2/19
	FOR BIDDING		1/1/2/19
	FOR PERMIT		1/1/2/19
NOT	FOR CONTRACTING		
NOT	FOR CONSTRUCTION		

KIMA & ASSOCIATES, INC. ARCHITECTS

1121 LAKE COOK ROAD
EERFIELD, ILLINOIS
347)945-6869

SUITE F
60015-5235
FAX(847)945-0284

The logo is a graphic design consisting of several thick, light-colored lines forming a stylized letter 'M'. The design is composed of straight lines and some diagonal elements, all contained within a rectangular frame.

SHEET TITLE
ELECTRICAL SCHEDULES
ELECTRICAL RISER DIAGRAM
ELECTRICAL NOTES

TH-18 DRAWING	NOT FOR COORDINATION	1/1/21
NOT FOR BIDDING	FOR PERMIT	1/1/21
NOT FOR CONTRACTING	NOT FOR CONSTRUCTION	

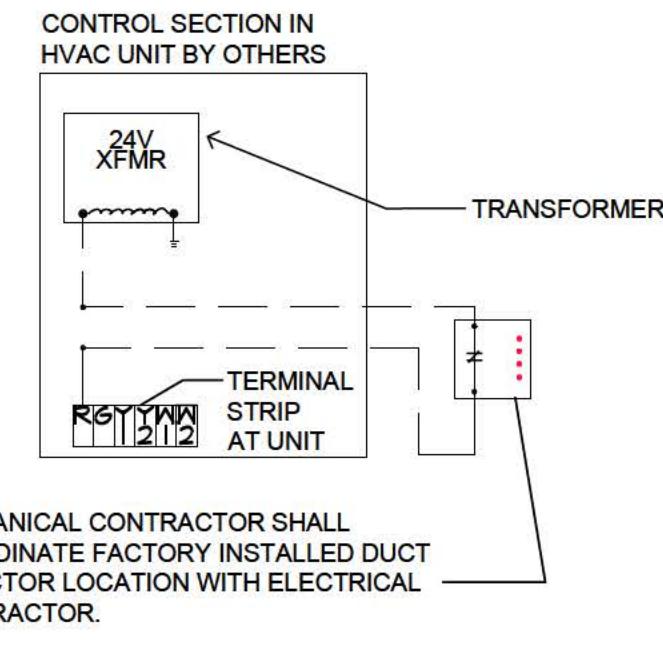
KMA & ASSOCIATES, INC. ARCHITECTS
SUITE F
60015-2235
FAX(847)945-6669



O'REILLY AUTO PARTS
DOLTON PLAZA
1317 E. SIBLEY BLVD., DOLTON, IL 60419
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE
ELECTRICAL GENERAL PLAN
ELECTRICAL SHEET
ELECTRICAL SCHEDULES

PANELBOARD: MP											
BUS AMPS: 400A MAIN SIZE/TYPE: MLO VOLTS/PHASE: 120/208V, 3PH, 4W TYPE SQ.D. LINE, NO.											
A/C RATING: 22AIC SERVES: GENERAL POWER											
GRAYBAR ELECTRICAL CO. INC. 11685 LACKLAND ROAD ST.LOUIS, MO 63146											
CIRCUIT BREAKER SCHEDULE											
CIRCUIT NO.	DESCRIPTION	VOLTAMPS/PHASE	WIRE NO.	BKR AMP	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE	DESCRIPTION	CIRCUIT NO.	
1	SPARE	12	1	3	45	8	3600	RTU 1		4	
3	GENERAL LIGHTING	3	12	20	1	3	3600	3600		6	
6	SPARE	12	20	1	3	50	8	4920	RTU 2	10	
9	SPARE	12	20	1	3	50	8	4920		12	
11	SPARE	12	20	1	3	50	8	4920	RTU 3	14	
13	GENERAL LIGHTING	449	12	20	1	3	45	8	3600	16	
15	SPARE	12	20	1	3	50	8	3600		18	
17	SPARE	12	20	1	3	50	8	3600	SMOKE DETECTORS	20	
19	SPARE	12	20	1	3	50	8	3600		22	
21	SPARE	12	20	1	3	50	8	3600	SPACE	24	
23	BUILDING LIGHTING	210	12	20	1	3	50	8	3600	SPACE	26
26	SITE LIGHTING	600	12	20	1	3	50	8	3600	SPACE	28
27	SECURITY LIGHTING	300	12	20	1	3	50	8	3600	SPACE	30
29	SITE SIGN	1300	6	20	1	1	1	1	SPARE	32	
31	SITE SIGN	1300	6	20	1	1	1	1	SPARE	34	
33	SPARE	20	1	1	1	1	1	1	SPARE	36	
35	SPARE	20	1	1	1	1	1	1	SPARE	38	
36	SPARE	20	1	1	1	1	1	1	SPARE	40	
41	SPARE	20	1	1	1	1	1	1	SPARE	42	
SUBTOTAL											
TOTAL PHASE A-VA	15619	LOAD	CONN VA	0	ACCESORIES:						
AMPS	129.3	COOLING	36360	1.00	1 EQUIPPED GROUND BAR						
TOTAL PHASE B-VA	12475	HEATING	N/A	1.00	2 ISOLATED GROUND BAR						
AMPS	102.0	WATER	5000	1.00	3 SG D #Q01PA - LOCKABLE CLIPS						
TOTAL PHASE C-VA	14170	GEN RECEPTS	1640	1.00	5 CIRCUIT TO BE ROUTED THROUGH TRANSFER SWITCH "E"						
AMPS	118.0	MOTORS	N/A	1.00	6 CIRCUIT TO BE ROUTED THROUGH TIME CLOCK						
TOTAL PANEL-VA	42162	APPLIANCES	N/A	1.00	7 PANEL TO BE SUPPLIED WITH FEED THRU LUGS						
AMPS	117.1	MISC EQUIP	N/A	0.00							
PANEL AMP'S AT 90%											
PANELBOARD: PLP											
BUS AMPS: 400A MAIN SIZE/TYPE: MLO VOLTS/PHASE: 120/208V, 3PH, 4W TYPE SQ.D. LINE, NO.											
A/C RATING: 22AIC SERVES: GENERAL POWER											
GRAYBAR ELECTRICAL CO. INC. 11685 LACKLAND ROAD ST.LOUIS, MO 63146											
CIRCUIT NO.	DESCRIPTION	VOLTAMPS/PHASE	WIRE NO.	BKR AMP	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE	DESCRIPTION	CIRCUIT NO.	
1	SPARE	12	20	1	1	20	1	20	SPARE	2	
3	SPARE	12	20	1	1	20	1	20	SPARE	4	
6	SPARE	12	20	1	1	20	1	20	SPARE	8	
9	SPARE	12	20	1	1	20	12	50	TIME CLOCK	10	
11	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	12	
13	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	14	
15	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	16	
17	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	18	
19	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	20	
21	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	22	
23	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	24	
25	RECEPTACLES/ILLUMINAT.	1000	12	20	1	1	20	50	RTU RECEP/TACLES	26	
27	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	28	
28	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	30	
31	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	32	
33	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	34	
35	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	36	
37	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	38	
38	SPARE	12	20	1	1	18	12	50	RTU RECEP/TACLES	40	
41	SPARE	12	20	1	1	20	12	50	RTU RECEP/TACLES	42	
SUBTOTAL											
TOTAL PHASE A-VA	1000	LOAD	CONN VA	0	ACCESORIES:						
AMPS	84.3	COOLING	N/A	1.00	1 EQUIPPED GROUND BAR						
TOTAL PHASE B-VA	58	HEATING	N/A	1.00	2 ISOLATED GROUND BAR						
AMPS	41	LIGHTING	N/A	1.00	3 GFCI BREAKER CKT #23#16						
TOTAL PHASE C-VA	540	GEN RECEPTS	1500	1.00	4 MUST BE TYPE "HACR" BREAKER						
AMPS	4.5	MOTORS	N/A	1.00	5 CIRCUIT TO BE ROUTED THROUGH TRANSFER SWITCH "E"						
TOTAL PANEL-VA	1890	APPLIANCES	N/A	0.00	6 CIRCUIT TO BE ROUTED THROUGH TIME CLOCK						
AMPS	4.4	MISC EQUIP	N/A	0.00	7 SQ D #Q01PA - LOCKABLE CLIPS						
PANEL AMP'S AT 80%											



INDICATES WIRING BY ELECTRICAL CONTRACTOR

- NOTES:
A. DUCT DETECTOR SHALL BE FURNISHED BY RTU SUPPLIER AND MOUNTED BY M.C. WIRED BY THE E.C.
B. ALL EQUIPMENT & WIRING SHALL BE IN CONFORMANCE WITH ALL APPLICABLE CODES AND REGULATIONS.

HVAC CONTROL WIRING SCHEMATIC

SCALE: NONE

NOTE:
BUILD-OUT LIGHTING FIXTURES INCLUDING STRIP, RECESSED LIGHTING, ADDITIONAL EMERGENCY AND EXIT SHALL BE FURNISHED AND INSTALLED UNDER SEPARATE PERMIT SUBMITTAL.

NOTE:
BUILD-OUT GENERAL POWER INCLUDING RECEPTACLES, EXHAUST FANS, DISPLAY OUTLETS AND ETC SHALL BE FURNISHED AND INSTALLED UNDER SEPARATE PERMIT SUBMITTAL.

NOTE:
ELECTRICAL TRADE SHALL WIRE EXIT LIGHTING TO SEPARATE INDEPENDENT UN-SWITCHED CIRCUIT. WIRE IN SEPARATE RACEWAY. WIRING IS NOT SHOWN FOR CLARITY. NO APPLIANCES, LAMPS OTHER THAN THOSE SPECIFIED AS REQUIRED FOR EMERGENCY USE. SHALL BE SUPPLIED BY EMERGENCY CIRCUITS.

GROUNDBING NOTE:
ALL BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUNDBING CONDUCTOR ROUTED WITH THE CIRCUIT CONDUCTOR, SIZE IN ACCORDANCE WITH TABLE 250.12 OF THE N.E.C. ELECTRICAL SHALL PROVIDE SEPARATE ISOLATED AND GFI GROUNDBING CONDUCTOR AS NOTED ON PLANS. ISOLATED AND GFI ARE NOT TO BE USED AS EQUIPMENT GROUNDS.



DIVISION 16
ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

A. THE GENERAL, SPECIAL, AND OTHER CONDITIONS OF THE ARCHITECTURAL DOCUMENTS SHALL BE CONSIDERED AN INTEGRAL PART OF THESE ELECTRICAL SPECIFICATIONS.

B. REFERENCE TO "CONTRACTOR" IN THIS SPECIFICATION SHALL MEAN "ELECTRICAL CONTRACTOR", UNLESS OTHERWISE NOTED.

1.02 DRAWINGS AND DOCUMENTS

A. THE ELECTRICAL DRAWINGS AND SPECIFICATIONS SHALL FORM A SET OF PLANS FOR THE ELECTRICAL WORK. NEITHER THE DRAWINGS NOR THE SPECIFICATIONS SHALL BE COMPLETE WITHOUT THE OTHER. ANY ITEM SHOWN ON THE DRAWINGS OR SPECIFIED IN THE SPECIFICATIONS SHALL BE CONSIDERED AS SHOWN AND SPECIFIED ON BOTH.

B. ANY QUESTIONS REGARDING THE INTENT OF THE DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION AS SOON AS POSSIBLE. IF DIRECTION FROM THE ENGINEER CANNOT BE OBTAINED DUE TO TIME OR COMMUNICATION LIMITATIONS, THE GREATER QUANTITY, HIGHER QUALITY OR CONDITION IS MOST FAVORABLE TO THE OWNER. THE ASSUMED CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND OTHER ITEMS NECESSARY FOR A COMPLETE AND OPERATIONAL ELECTRICAL INSTALLATION, AS SHOWN ON THE DRAWINGS AND CALLED FOR IN THESE SPECIFICATIONS.

C. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS. COORDINATE ALL SHAFTS, CHASES, FURPED SPACES, SUSPENDED CEILINGS, LOCATIONS OF EQUIPMENT, ETC.

D. ELECTRICAL CONTRACTOR SHALL COORDINATE ROUTING OF ALL CONDUIT AND WIRE WITHIN SOFFITS PROVIDED BY THE GENERAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SOFFITING REQUIRED TO COVER INSTALLATIONS NOT COORDINATED OR SPECIFICALLY APPROVED BY THE ARCHITECT AND ENGINEER.

E. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW APPROXIMATE LOCATION ONLY. PLACEMENT OF ELECTRICAL EQUIPMENT AND DEVICES SHALL NOT INTERFERE WITH LOCATIONS OR CLEARANCES OF OTHER TRADES' MATERIALS OR EQUIPMENT.

F. DIMENSIONS GIVEN ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALLED DIMENSIONS. DIMENSIONS, WHETHER GIVEN IN FIGURES OR SCALDED, SHALL BE VERIFIED ON THE FIELD.

G. CONTRACTOR SHALL VERIFY THAT THE EQUIPMENT TO BE FURNISHED UNDER CONTRACT WILL FIT WITHIN THE AVAILABLE SPACE.

H. NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES BETWEEN ELECTRICAL, ARCHITECTURAL, AND MECHANICAL DRAWINGS.

I. VERIFY ITEMS SUCH AS DOOR SWINGS, WINDOW LOCATIONS, CASEWORK, ETC., BEFORE INSTALLING ANY ELECTRICAL EQUIPMENT OR DEVICES. ALL DEVICES CONFLICTING WITH AND OTHER TRADES WORK DUE TO LACK OF COORDINATION SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER.

1.03 SCOPE OF WORK

A. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND OTHER ITEMS NECESSARY FOR OR INCIDENTAL TO THE INSTALLATION OF A COMPLETE ELECTRICAL SYSTEM AS REQUIRED FOR THIS PROJECT.

1.04 CODES, INSPECTIONS, AND FEES

A. THE COMPLETED ELECTRICAL INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS WELL AS ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, REGULATIONS, AND STANDARDS, INCLUDING INTERPRETATIONS OF THESE BY APPROPRIATE AUTHORITIES HAVING JURISDICTION. WHERE THE DRAWINGS AND SPECIFICATIONS CALL FOR WORKMANSHIP OR MATERIALS IN EXCESS OF CODE OR REGULATORY REQUIREMENTS, THE DRAWINGS AND SPECIFICATIONS SHALL GOVERN.

B. THE WORK SPECIFIED HEREIN SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY AUTHORIZED REPRESENTATIVES OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION, AND THE ENGINEER. THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS TO HAVE THE ELECTRICAL WORK INSPECTED BY APPROPRIATE INSPECTOR(S) AND SHALL PROVIDE TWO (2) COPIES OF EVERY FINAL SIGNED "CERTIFICATE OF INSPECTION" TO THE OWNER.

C. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES AND PERMITS, PAY ALL FEES AND CHARGES FOR ALL WORK INSTALLED BY THE CONTRACTOR, AND PAY ALL FEES AND CHARGES levIED BY THE ELECTRIC UTILITY COMPANY FOR CONNECTION TO ELECTRIC SERVICES.

1.05 INSPECTION OF SITE

A. DIVISION 16 CONTRACTOR SHALL VISIT SITE PRIOR TO BID AND FAMILIARIZE HIMSELF WITH ALL Existing CONDITIONS IN REGARD TO THE REQUIREMENTS OF THIS CONTRACT. ANY VISIBLE OR EASILY ATTAINABLE INFORMATION AVAILABLE AT THE SITE, EVEN IF DERIVED FROM THESE DOCUMENTS, WILL NOT RESULT IN EXTRA COMPENSATION AFTER TIME OF BID. ANY DISCREPANCIES FROM THESE DOCUMENTS, SHOULD BE REPORTED TO THE ARCHITECT/ENGINEER AS SOON AS POSSIBLE.

1.06 TEMPORARY ELECTRICAL SERVICE

A. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A TEMPORARY LIGHTING AND POWER SYSTEM AT A LOCATION SPECIFIED BY THE GENERAL CONTRACTOR. THE SERVICE SHALL BE 120-VOLT, 1-PHASE, 60-HZ, WITH APPROPRIATE METERS AND PROTECTION. EQUIPMENT COMPONENTS OF THE TEMPORARY SYSTEM SHALL BE AS REQUIRED BY THE GENERAL CONTRACTOR. THE SYSTEM SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR SHALL REMOVE THE TEMPORARY SYSTEM WHEN IT IS NO LONGER NEEDED.

1.07 MATERIALS AND EQUIPMENT

A. UNLESS OTHERWISE SPECIFIED, ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND MANUFACTURED BY RECOGNIZED MANUFACTURERS. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF GOVERNING CODES.

B. ALL MATERIAL AND EQUIPMENT SHALL BE LISTED AND LABELED BY UNDERWRITERS LABORATORIES, INC. (UL) AS CONFORMING TO ITS STANDARDS. IN EVERY CASE WHERE SUCH A STANDARD HAS BEEN ESTABLISHED FOR THAT TYPE OF MATERIAL OR EQUIPMENT.

C. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL TO USE ANY PROPOSED SUBSTITUTE MATERIAL OR EQUIPMENT BEFORE CONTRACT TO PURCHASE SUCH MATERIALS. THE CONTRACTOR SHALL NOT REMOVE OR REPLACE THE REMAINDER OF ANY MATERIAL OR EQUIPMENT WHICH DOES NOT HAVE THIS WRITTEN APPROVAL AND WHICH DOES NOT COMPLY WITH THE SPECIFICATIONS, REGARDLESS OF THE STATE OF INSTALLATION OF SUCH EQUIPMENT.

D. WHERE EQUIPMENT SUPPLIED BY THE CONTRACTOR HAS CHARACTERISTICS OTHER THAN AS SPECIFIED HEREIN, THE CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, MAKE ALL CHANGES IN THE ELECTRICAL WORK NECESSITATED BY THE SUBSTITUTION.

1.08 WORKMANSHIP

A. THE INSTALLATION SPECIFIED HEREIN SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER BY PERSONS EXPERIENCED AND SKILLED IN THE TRADE. ONLY THE BEST QUALITY WORKMANSHIP WILL BE ACCEPTED. ALL EXPOSED COMPONENTS OF THE ELECTRICAL SYSTEMS SHALL BE SQUARE AND TRUE WITH BUILDING LINES AND SURFACES.

- 1.09 CORRELATION OF WORK
- A. THE CONTRACTOR SHALL GIVE CAREFUL CONSIDERATION TO THE WORK OF THE GENERAL, MECHANICAL, AND ALL OTHER CONTRACTORS AND SUBCONTRACTORS ON THE PROJECT AND SHALL ORGANIZE THE ELECTRICAL WORK SO THAT IT WILL NOT INTERFERE WITH THE WORK OF OTHER TRADES.
- B. DRAWINGS AND SPECIFICATIONS FOR OTHER TRADES AND GENERAL CONSTRUCTION DRAWINGS SHALL BE CONSULTED FOR CORRELATION INFORMATION, DETAILS, DIMENSIONS, ETC.
- C. THE LOCATION OF ALL OUTLETS, WIRING, AND EQUIPMENT SHALL BE VERIFIED.
- D. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR MOVING MISPLACED ELECTRICAL SYSTEM COMPONENTS.
- 1.10 MAINTENANCE MANUAL
- A. THE CONTRACTOR SHALL FURNISH THE OWNER WITH TWO (2) COPIES OF A MANUAL COVERING THE OPERATION AND MAINTENANCE OF ALL EQUIPMENT PROVIDED UNDER THIS CONTRACT. THE MANUALS SHALL BE 3-RING, LOOSE LEAF, HEAVY DUTY, STEEL PIANO HINGED NOTEBOOKS, HYTONE #8711 OR EQUAL, AND SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL. EACH MANUAL SHALL CONTAIN THE FOLLOWING:
1. COMPLETE MANUFACTURER CATALOG DATA, MANUFACTURER'S LITERATURE, WIRING DIAGRAMS, DETAILED OPERATING INSTRUCTIONS, AND A COMPLETE LISTING OF SUPPLIERS AND DISTRIBUTORS WHERE REPLACEMENT PARTS AND MAINTENANCE SERVICES ARE AVAILABLE FOR ALL EQUIPMENT.
 2. INSPECTION PLATES, SPECIFICATIONS, AND APPROPRIATE INSPECTOR'S SHEET, REFERRED TO IN THE MAINTENANCE MANUAL.
 3. AS WORK PROGRESSES, THE CONTRACTOR SHALL MARK A SET OF CONSTRUCTION DOCUMENTS TO SHOW ACTUAL CIRCUIT ROUTING AND MAKEUP, EQUIPMENT LOCATION CHANGES, AND ANY OTHER CHANGES OR DEVIATIONS BETWEEN PROJECT WORK AS BUILT, AND THE CONTRACT DOCUMENTS. MARKINGS SHALL BE NEAT, LEGIBLE, AND PERMANENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL SIMILARLY MARK A SECOND SET OF DOCUMENTS AND PROVIDE BOTH SETS OF AS-BUILT DOCUMENTS TO THE OWNER WITH THE MAINTENANCE MANUALS.
- 1.11 GUARANTEE
- A. THE CONTRACTOR SHALL FURNISH THE OWNER WITH A WRITTEN GUARANTEE FOR THE PERIOD OF ONE (1) YEAR AGAINST THE FAILURE OF ANY PART OF THE ELECTRICAL SYSTEM INSTALLED UNDER THE SPECIFICATIONS DUE TO DEFECTS IN MATERIAL OR WORKMANSHIP. THE GUARANTEE PERIOD SHALL START UPON SUBSTANTIAL COMPLETION OR AS SPECIFIED UNDER GENERAL AND SPECIAL CONDITIONS. LAMP BULBS SHALL BE OPERABLE ON THE START DATE OF, BUT EXCLUDED FROM THE GUARANTEE.
- B. THE CONTRACTOR SHALL ASSURE THAT ANY EXTENDED WARRANTIES TO WHICH THE OWNER IS ELIGIBLE ARE PASSED ON TO THE OWNER.
- 1.12 CUTTING AND PATCHING
- A. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY FOR THE COMPLETION OF THE ELECTRICAL WORK FOR THIS PROJECT. NO STRUCTURAL MEMBERS SHALL BE DISTURBED WITHOUT OBTAINING WRITTEN PERMISSION OF THE ENGINEER.
- B. ANY SURFACE WHICH IS DISTURBED IN ANY WAY BY THE CONTRACTOR SHALL BE REPAVED AND REFINISHED TO PROVIDE A SURFACE EQUAL IN STRENGTH, DURABILITY, AND APPEARANCE TO THE ORIGINAL SURFACE.
- C. WHERE IT IS NECESSARY TO DRILL OR CUT CONCRETE SURFACES, THE EDGES SHALL BE SHARPLY DEFINED. HOLES SHALL BE MADE WITH A ROTARY DRILL. CUTS SHALL BE MADE WITH A CONCRETE SAWS UNLESS SOME OTHER METHOD OF MAKING SPECIFIC CUTS IS APPROVED BY THE ENGINEER.
- D. PENETRATIONS THROUGH SMOKE, FIRE, HAZARDOUS AREA, OR OTHER RATED SEPARATIONS SHALL BE SEALED TO PRESERVE THE RATINGS OF THE SEPARATIONS.
- E. ALL CUTTING, DRILLING, PATCHING, REPAIRING, AND REFINISHING SHALL BE DONE BY PERSONS SKILLED IN APPROPRIATE TRADES.
- F. THE CONTRACTOR SHALL CLEAN AWAY ALL RUBBISH AND LITTER GENERATED DURING ELECTRICAL INSTALLATION.
- 1.13 DEMOLITION
- A. WHERE ELECTRICAL WORK TO REMAIN IS DAMAGED OR DISTURBED IN THE COURSE OF THE WORK, REMOVE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL CAPACITY, QUALITY, AND FUNCTIONALITY.
- B. ACCESSIBLE WORK INDICATED TO BE DEMOLISHED: REMOVE EXPOSED ELECTRICAL INSTALLATION IN ITS ENTIRETY.
- C. ABANDONED WORK: CUT AND REMOVE BURIED RACEWAY AND WIRING INDICATED TO BE ABANDONED IN PLACE, 2 INCHES FROM THE SURFACE OF ADJACENT CONSTRUCTION. CAP AND PATCH SURFACE TO MATCH EXISTING FINISH.
- D. REMOVAL: REMOVE DEMOLISHED MATERIAL FROM THE PROJECT SITE.
- E. TEMPORARY DISCONNECTION: REMOVE, STORE, CLEAN, REINSTALL, RECONNECT, AND MAKE OPERATIONAL COMPONENTS INDICATED FOR RELOCATION.
- 1.14 WIRING DEVICES
- A. WHERE ELECTRICAL WORK TO REMAIN IS DAMAGED OR DISTURBED IN THE COURSE OF THE WORK, REMOVE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL CAPACITY, QUALITY, AND FUNCTIONALITY.
- B. SWITCHES AND RECEPTACLES SHALL BE HUBBELL, BRYANT, LEVITON, PASS & SEYMOUR, OR APPROVED EQUAL SUBJECT TO APPROVAL BY THE ARCHITECT, COLOR SHALL BE WHITE.
- C. SWITCHES SHALL BE SPECIFICATION GRADE, AC QUIET TYPE, 20-AMP, 120/277-VOLT, WITH SILVER ALLOY CONTACTS, EQUAL TO HUBBELL #1221.
- D. GENERAL PURPOSE DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE NEMA 5-20R, 20-AMP, 125-VOLT, 3-WIRE GROUND TYPE DEVICES, EQUAL TO HUBBELL #5962, WITH THE THIRD POLE GROUNDED TO THE OUTLET BOX. EACH RECEPTACLE SHALL BE RIDGELY POSITIONED WITHIN THE BOX SO THAT THE EXPOSED FACE OF THE RECEPTACLE PROTRIDES BEYOND THE FACE OF THE COVER PLATE.
- E. GROUND FAULT CIRCUIT INTERRUPTER (GFI) DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE, 20-AMP DEVICES, EQUAL TO HUBBELL #GF5962, W RED SO THAT EACH UNIT IS SELF-CONTAINED. GFI RECEPTACLES SHALL NOT BE CONNECTED TO FEED THROUGH UNLESS SPECIFICALLY SO NOTED ON THE DRAWINGS.
- F. WEATHERPROOF DUPLEX RECEPTACLES SHALL BE GFCI PROTECTED WITH "WHILE-IN-USE" WEATHERPROOF COVERSPLATES.
- 1.15 WALL AND COVER PLATES
- A. THE CONTRACTOR SHALL FURNISH AND INSTALL WALL PLATES FOR ALL FLUSH MOUNTED WIRING DEVICES AND ALL FLUSH MOUNTED SPECIAL SYSTEM OUTLET CONNECTIONS. THESE SHALL BE USED WHERE THE PLATES SHALL BE INCORPORATED OVER ALL STEEL STUDS PROVIDED FOR FUTURE USE. WALL PLATES SHALL BE STAINLESS STEEL AS MANUFACTURED BY EAGLE, BRYANT, GENERAL ELECTRIC, HUBBELL OR LEVITON. WALL PLATES SHALL BE SECURED WITH MATCHING SCREWS. ENGRAVED WALL PLATES SHALL HAVE BACK FILL.
- B. COVER PLATES FOR TELEPHONE, SHALL BE AS SPECIFIED ABOVE.
- 1.16 METAL CONDUIT RACEWAY
- A. RIGID METAL CONDUIT SHALL BE INSTALLED WHERE EXPOSED TO WEATHER, OR WHERE IMBEDDED OR PASSING THROUGH CONCRETE, NONMETALLIC CONDUIT MAY BE USED FOR PYON SIGN AND PARKING LOT LIGHTING ONLY. FLEXIBLE METALLIC CONDUIT SHALL BE USED FOR FINAL CONNECTION TO ELECTRICAL EQUIPMENT SUBJECT TO MOVEMENT. EMT SHALL BE USED ELSEWHERE UNLESS OTHERWISE NOTED.
- B. ALL COMPONENTS OF CONDUIT RACEWAY SYSTEMS SUCH AS CONDUIT, SEAL TIGHT CONDUIT, BOXES, SUPPORTS AND FITTINGS SHALL MEET THE LATEST APPLICABLE STANDARD OF UNDERWRITERS LABORATORIES, INC. ALL STEEL COMPONENTS OF CONDUIT RACEWAY SYSTEMS SHALL BE HOT-DIPPED GALVANIZED, METALIZED, SHERADIZED, OR ZINC-COATED BY SOME OTHER APPROVED MEANS. SEAL TIGHT CONDUIT AND PVC CONDUIT SHALL HAVE SEPARATE GROUND CONDUCTOR.
- 1.17 PULLBOXES
- A. PULLBOXES SHALL BE INSTALLED AS REQUIRED IN LONG RUNS OR WHEN MORE THAN FOUR QUARTER BENDS OCCUR IN ANY CONDUIT RUN. ALL PULLBOXES SHALL BE SIZED TO CONFORM TO THE REQUIREMENTS OF ARTICLE 370 OF THE NATIONAL ELECTRICAL CODE. PULLBOXES SHALL BE RECESSED IN ALL FINISHED PORTIONS OF THE BUILDING.
- 1.18 OPERATING INSTRUCTIONS & TESTING
- A. THE CONTRACTOR SHALL FURNISH INSTRUCTION IN THE CARE, ADJUSTMENT, OPERATION, AND MAINTENANCE OF ALL PARTS OF THE ELECTRICAL EQUIPMENT. INSTRUCTION SHALL BE GIVEN TO EMPLOYEES DESIGNATED BY THE OWNER, AT NO ADDITIONAL COST TO THE OWNER, AND AT A TIME ACCEPTABLE TO THE OWNER, JUST PRIOR TO ACCEPTANCE OF THE EQUIPMENT BY THE OWNER.
- B. THE CONTRACTOR SHALL TEST THE EQUIPMENT INSTALLED UNDER THIS SPECIFICATION AND SHALL DEMONSTRATE ITS PROPER OPERATION TO THE ENGINEER. NO EQUIPMENT SHALL BE TESTED OR OPERATED FOR ANY PURPOSE UNTIL IT HAS BEEN FULLY PREPARED, CONNECTED, AND READIED FOR NORMAL OPERATION. ANY EQUIPMENT DAMAGED BY IMPROPER OR LL-TIMED OPERATION OR TESTING SHALL BE REPAVED OR REPLACED, AT THE CONTRACTOR'S EXPENSE, BEFORE FINAL INSPECTION AND ACCEPTANCE.
- 1.19 OTHER
- A. ALL CIRCUITS SPECIFIED ARE DESIGNED ON THE BASIS OF LOAD REQUIREMENTS AND CONTROL PROCEDURES AS INDICATED. THE CONTRACTOR SHALL MAKE THE NECESSARY CHANGES TO THE CIRCUITS AND CONTROL EQUIPMENT WHERE MOTORS, APPLIANCES, AND DEVICES FURNISHED BY THE CONTRACTOR HAVE OTHER RATINGS THAN THOSE INDICATED.
- B. 2-PRODUCTS
- 2.01 DISCONNECT SWITCHES
- A. THE CONTRACTOR SHALL FURNISH AND INSTALL DISCONNECT SWITCHES HAVING THE NUMBER OF POLES AND AMPERE RATINGS AS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN THE EQUIPMENT SCHEDULE.
- B. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, AC, SINGLE THROW SAFETY SWITCHES, BUILT IN ACCORDANCE WITH NEMA REQUIREMENTS WITH A VISIBLE FULL COVER INTERLOCK AND QUICK-MAKE, QUICK-BREAK MECHANISM. EACH SWITCH SHALL BE FUSIBLE UNLESS NONFUSIBLE. THE VISIBLE INTERLOCK MECHANISM SHALL BE IN NEUTRAL ENCLOSURES, A TINY LOCATION, AND NEMA 3 WHERE RELATED TO THE WEATHER. DISCONNECT SWITCHES SHALL BE "HEAVY DUTY" AS MANUFACTURED BY WESTINGHOUSE, OR SQUARE-D.
- C. DISCONNECT SWITCHES RATED AT 20A SHALL BE GENERAL USE, 20A, AC, SNAP SWITCH WIRING DEVICES.
- 2.02 FUSES
- A. THE CONTRACTOR SHALL FURNISH AND INSTALL FUSES OF THE TYPES AND RATINGS DESIGNATED IN THE DRAWINGS AND SPECIFICATIONS IN EACH FUSIBLE DEVICE INSTALLED BY THE CONTRACTOR. IN ADDITION, THE CONTRACTOR SHALL FURNISH AND STORE, AT A LOCATION DIRECTED BY THE OWNER, THREE (3) SPARE FUSES OF EACH SIZE AND TYPE INSTALLED DURING THIS PROJECT. THE CONTRACTOR SHALL PROVIDE TWO (2) COPIES OF THE SPARE FUSE LIST TO THE OWNER FOR OWNERS RECORDS. THE SPARE FUSE LIST SHALL BE TYPED ON THE CONTRACTOR'S LETTERHEAD.
- B. FUSES SHALL BE ONE-TIME CARRIAGE FUSES MANUFACTURED BY BUSSMANN, GOULD, SHAWMUT, OR LITTLE FUSE.
- 2.03 WIRE AND CABLE
- A. ELECTRICAL CONDUCTORS SHALL BE BUILDING WIRE, EXCEPT WHERE SOME OTHER TYPE OF WIRE OR CABLE IS SPECIFICALLY INDICATED.
- B. BUILDING WIRE CONDUCTORS SHALL BE SOFT-DRAWN ANNEALED COPPER, HAVING A CONDUCTIVITY OF NOT LESS THAN 98% PURE COPPER. CONDUCTOR SIZES ARE AMERICAN WIRE GAUGE (AWG) OR CIRCULAR MILS (CMC). MINIMUM CONDUCTOR SIZE SHALL BE #12 UNLESS OTHERWISE SPECIFIED. CONDUCTORS LARGER THAN #10 SHALL BE STRANDED. CONDUCTORS #10 AND SMALLER SHALL BE SOLID WIRE.
- C. BUILDING WIRE INSULATION SHALL BE 600-VOLT. CONDUCTORS SHALL HAVE TW, THW, THWN, OR THHN INSULATION UNLESS SPECIFICALLY NOTED OTHERWISE OR REQUIRED BY CODE OR APPLICATION TO BE OTHERWISE.
- 2.04 WIRING DEVICES
- A. WIRING DEVICES SHALL BE INSTALLED IN METAL CONDUIT DEVICE BOXES.
- B. SWITCHES AND RECEPTACLES SHALL BE HUBBELL, BRYANT, LEVITON, PASS & SEYMOUR, OR APPROVED EQUAL SUBJECT TO APPROVAL BY THE ARCHITECT, COLOR SHALL BE WHITE.
- C. SWITCHES SHALL BE SPECIFICATION GRADE, AC QUIET TYPE, 20-AMP, 120/277-VOLT, WITH SILVER ALLOY CONTACTS, EQUAL TO HUBBELL #1221.
- D. GENERAL PURPOSE DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE NEMA 5-20R, 20-AMP, 125-VOLT, 3-WIRE GROUND TYPE DEVICES, EQUAL TO HUBBELL #5962, WITH THE THIRD POLE GROUNDED TO THE OUTLET BOX. EACH RECEPTACLE SHALL BE RIDGELY POSITIONED WITHIN THE BOX SO THAT THE EXPOSED FACE OF THE RECEPTACLE PROTRIDES BEYOND THE FACE OF THE COVER PLATE.
- E. GROUND FAULT CIRCUIT INTERRUPTER (GFI) DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE, 20-AMP DEVICES, EQUAL TO HUBBELL #GF5962, W RED SO THAT EACH UNIT IS SELF-CONTAINED. GFI RECEPTACLES SHALL NOT BE CONNECTED TO FEED THROUGH UNLESS SPECIFICALLY SO NOTED ON THE DRAWINGS.
- F. WEATHERPROOF DUPLEX RECEPTACLES SHALL BE GFCI PROTECTED WITH "WHILE-IN-USE" WEATHERPROOF COVERSPLATES.
- 2.05 WALL AND COVER PLATES
- A. THE CONTRACTOR SHALL FURNISH AND INSTALL WALL PLATES FOR ALL FLUSH MOUNTED WIRING DEVICES AND ALL FLUSH MOUNTED SPECIAL SYSTEM OUTLET CONNECTIONS. THESE SHALL BE USED WHERE THE PLATES SHALL BE INCORPORATED OVER ALL STEEL STUDS PROVIDED FOR FUTURE USE. WALL PLATES SHALL BE STAINLESS STEEL AS MANUFACTURED BY EAGLE, BRYANT, GENERAL ELECTRIC, HUBBELL OR LEVITON. WALL PLATES SHALL BE SECURED WITH MATCHING SCREWS. ENGRAVED WALL PLATES SHALL HAVE BACK FILL.
- B. COVER PLATES FOR TELEPHONE, SHALL BE AS SPECIFIED ABOVE.
- 2.06 MANUAL MOTOR STARTERS
- A. MANUAL STARTERS SHALL BE TOGGLE SWITCH TYPE STARTERS. WHERE A RED PILOT LIGHT IS INDICATED, THE LIGHT SHALL BE A NEON BULB INTEGRAL WITH THE STARTER. FLUSH MOUNTING UNITS SHALL HAVE ENGRAVED WALL PLATES. SURFACE MOUNTING UNITS SHALL BE IN NEMA 1 ENCLOSURES, UNLESS SOME OTHER TYPE OF ENCLOSURE IS INDICATED. MANUAL STARTERS SHALL BE CUTLER HAMMER BULLETIN 9101 OR SQUARE-D CLASS 2510.
- 2.08 PANELBOARDS
- A. PANELBOARDS SHALL BE SQUARE D #LINE.
- B. PANELBOARDS SHALL BE DEAD FRONT SAFETY TYPE WITH ENCLOSURES OF CODE GRADE STEEL. OVERSIZE GUTTERS SHALL BE PROVIDED FOR FEED THROUGH WHERE INDICATED OR REQUIRED. WHERE DOUBLE LUGS ARE NOT PERMITTED BY LOCAL CODE, A SUITABLE PULL BOX OR GUTTER ADJACENT TO PANELS SHALL BE PROVIDED FOR CONNECTIONS. TOP OF PANELBOARD TUBS SHALL BE 6'-6" ABOVE FINISHED FLOOR.

- C. PANELBOARDS SHALL HAVE TRIM AND FLAT LOCKING DOORS WITH BOTH HINGES AND TRIM CLAMPS COMPLETELY CONCEALED. DOOR LOCKS SHALL BE FLUSH WITH THE COVER. ALL DOOR LOCKS SHALL BE COMMON KEYED. TWO (2) KEYS SHALL BE PROVIDED FOR EACH PANELBOARD. A CLEAR PLASTIC COVERED TYPEWRIENED CIRCUIT DIRECTORY SHALL BE MOUNTED IN A CARD HOLDER LOCATED ON THE INSIDE DOOR. DRAFTING PANELBOARDS SHALL HAVE BLACK MICARTA PLATES WITH 1/2 INCH HIGH WHITE CUT LETTERS STATING PANELBOARD NUMBER AND VOLTAGE. WHERE PANELBOARDS ARE IN PUBLIC AREAS, IDENTIFICATION PLATES SHALL BE INSIDE DOOR.
- D. BUSSES SHALL BE MADE FROM 98 PERCENT ELECTROLYTIC COPPER. THE USE OF ALUMINUM SHALL NOT BE ALLOWED, AND SHALL BE INDEPENDENTLY SUPPORTED (WITHOUT TENSION) ON THE CIRCUIT BREAKERS. SOURCE OF POWER SHALL BE ONLY SHOWN PROVIDED. NO MAINS SHALL BE NOTED OTHERWISE IN THE PANELBOARD SCHEDULE. ALL MAIN LUGS SHALL BE CRIMP COMPRESSION TYPE WHERE BREAKERS AND/OR SWITCHES ARE LISTED IN THE SCHEDULES AS "SPACE ONLY", THIS SHALL INCLUDE EXTENDED BUS AND MOUNTING PROVISIONS.

- E. CIRCUIT BREAKERS SHALL BE BOLT-ON AND SHALL HAVE BOLTED LINE AND LOAD TERMINALS. ALL BRANCH CIRCUIT BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK, THERMAL MAGNETIC, COMMON TRIP ON ALL MULTIPOLE BREAKERS AND HAVE A MINIMUM UL SHORT CIRCUIT RATING OF 10,000 SYMMETRICAL RMS. AMPS. EACH BREAKER SHALL HAVE ITS CURRENT RATING ENGRAVED, IN EASY TO READ NUMBERS, ON THE TOGGLE HANDLE. ALL BREAKERS USED FOR FLUORESCENT LIGHTING SWITCHING CONTROL SHALL BE LISTED SWD SWITCHING DUTY.
- F. CIRCUIT NUMBERS APPEARING ON DRAWINGS SHALL BE USED FOR REFERENCE ONLY. ACTUAL CONNECTIONS SHALL BE IN ACCORDANCE WITH PHASING OF THE CABINET, LOAD BALANCE, AND COMMON NEUTRAL REQUIREMENTS. ROOM NUMBERS OR NAMES USED FOR CIRCUIT IDENTIFICATION SHALL CORRESPOND TO NAME PLATES INSTALLED ON ROOM DOORS BY THE GENERAL CONTRACTOR OR AS SELECTED BY THE OWNER AND SHALL BE VERIFIED AS THESE MAY NOT BE THE SAME AS ROOM TITLES ON THE DRAWINGS.
- 2.10 LIGHTING FIXTURES
- A. ALL LIGHTING FIXTURES AND LAMPS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. REFER TO LIGHT FIXTURE SCHEDULE ON DRAWINGS FOR LIGHT FIXTURE MANUFACTURERS AND FEATURES. LAMPS SHALL BE BY OSRAM-Sylvania, GENERAL ELECTRIC, OR PHILIPS.

- 2.11 GROUNDING SYSTEMS
- A. CIRCUITS, METAL RACEWAY SYSTEMS, AND ALL OTHER PERMANENTLY INSTALLED ELECTRICAL EQUIPMENT SHALL BE SOLIDLY GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE TO FORM A CONTINUOUS, PERMANENT AND EFFECTIVE GROUNDING SYSTEM.
- B. GROUNDING CONDUCTOR CONNECTIONS SHALL BE MADE WITH SOLDERLESS PRESSURE-TYPE FITTINGS. WHERE WELDED CONNECTIONS ARE PRACTICAL, CONNECTIONS MAY BE MADE BY THE USE OF A SUITABLE WELDING PROCESS. ALL CONNECTIONS SHALL BE MADE IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- C. TO MAINTAIN UNINTERRUPTED ELECTRICAL CONTINUITY, FLEXIBLE RACEWAY SECTIONS MUST HAVE CONDUCTANCE EQUAL TO THAT OF THE SYSTEMS INFLEXIBLE RACEWAY. RACEWAY FITTINGS USED MUST BE SUCH AS TO ENSURE EXISTENCE OF A PERMANENT BOND. GROUNDING BUSHINGS SHALL BE PROVIDED TO GROUND CONDUITS TO CENTER GROUND. ALL NEW EQUIPMENT SHALL BE GROUNDED TO THE EXISTING GROUNDING SYSTEM.
- D. PROVIDE SERVICE GROUNDING AS INDICATED ON ONE-LINE DIAGRAM.

- E. INCLUDE A SEPARATE BARE GROUND CONDUCTOR IN ALL TYPE NM CABLE OF THE SAME SIZE AS PHASE CONDUCTOR.
- F. INCLUDE A SEPARATE GROUND CONDUCTOR IN ALL PVC RACEWAY.
- 2.12 IDENTIFICATION AND LABELING OF ELECTRICAL EQUIPMENT
- A. ALL CONTROL DEVICES AND DEVICE ENCLOSURES SHALL BE LABELED WITH INDIVIDUAL NAME PLATES OR LEGEND PLATES.
- B. INDIVIDUAL NAME OR LEGEND PLATES SHALL BE BLACK LAMINATED PLASTIC OR MICARTA PLATES WITH WHITE CUT LETTERS, PAPER, FOIL, OR TAPE.
- C. MARKERS ATTACHED WITH ADHESIVES SHALL NOT BE USED.

- 2.13 SERVICE TO ELECTRICALLY-POWERED EQUIPMENT
- A. THE CONTRACTOR SHALL FURNISH AND INSTALL OUTLETS FOR AND MAKE FINAL ELECTRICAL CONNECTIONS TO ALL MOTORS AND ELECTRICALLY POWERED EQUIPMENT INDICATED ON THE EQUIPMENT SCHEDULE.
- B. THE CONTRACTOR SHALL OBTAIN EXACT INFORMATION PERTAINING TO LOCATION, ELECTRICAL CHARACTERISTICS, AND WIRING FOR EQUIPMENT FURNISHED BY OTHERS FROM THE CONTRACTOR FURNISHING THE EQUIPMENT. THIS INFORMATION SHALL BE PROVIDED IN THE EQUIPMENT SPECIFICATIONS AND MANUFACTURER WIRING DIAGRAMS. ANY DISCREPANCY BETWEEN THE EQUIPMENT REQUIREMENTS AND THE PROVISIONS MADE BY THESE SPECIFICATIONS SHALL BE REPORTED. EQUIPMENT DAMAGED AS A RESULT OF THE CONTRACTOR'S FAILURE TO OBSERVE MANUFACTURERS' REQUIREMENTS SHALL BE REPAVED OR REPAID BY THE CONTRACTOR. THE THERMAL PROTECTION ELEMENTS IN MANUAL STARTERS SHALL BE RECHECKED WITH NAME PLATE DATA AT THE SITE BEFORE OPERATION OF THE EQUIPMENT.