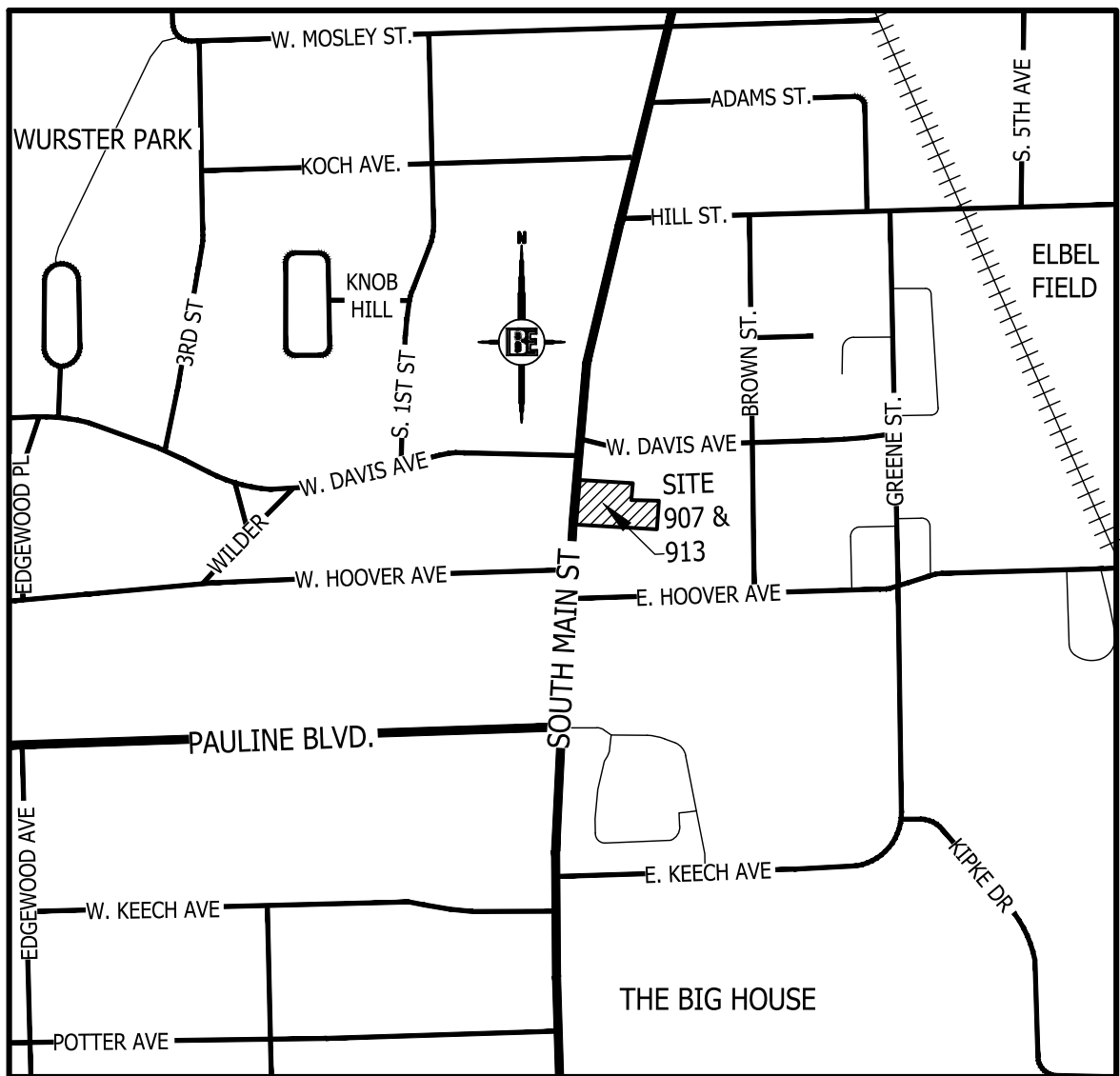


SITE PLAN SUBMITTAL FOR
MAIN + DAVIS APARTMENTS
907-913 SOUTH MAIN STREET
CITY OF ANN ARBOR, WASHTENAW COUNTY, MI



LOCATION MAP
AREA WITHIN 1,000-FT OF SITE
SCALE: +/-1"=400'

PROPERTY DESCRIPTION:

GENERAL INFORMATION:

PARCEL NOS.: 09-09-32-113-007 AND 09-09-32-113-008
ZONING: R4C
AREA: TOTAL OF 0.32 ACRES

LEGAL DESCRIPTION (AS PROVIDED):

Property Address: 907 & 913 SOUTH MAIN STREET

Land in the County of Washtenaw, City of Ann Arbor, State of Michigan, described as follows:

Commencing at the Southwest Corner of Lot 7 (being the intersection of the East right-of-way line of South Main Street and the north right-of-way line of East Hoover Avenue) of Brown and Bachs Addition to the City of Ann Arbor, Washtenaw County, State of Michigan, as recorded in Liber 48 of Deeds, page 360 at the Washtenaw County Register of Deeds, Washtenaw County, State of Michigan; thence N02°28'16"E 123.87 feet along the said East right-of-way line of South Main Street for a Place of Beginning; thence continuing along said right-of-way line N02°28'16"E 104.11 feet; thence N87°34'40"E 96.34 feet along the north line of the south 17 feet of Lot 5 of said Addition to the City of Ann Arbor; thence S01°46'32"E 52.12 feet along the west line of the east 70 feet of Lots 5 and 6 of said Addition; thence N87°32'07"E 70.01 feet along the north line of the south 1/2 of Lot 5 of said Addition; thence S01°46'32"E 51.49 along the east line of said Lots 5 and 6; thence S87°31'14"W 174.05 feet along the south line of the north 17.5 feet to the Place of Beginning. Being parts of Lots 5 and 6 of said Addition and containing 0.32 acres (13992 sq. ft.) of land, more or less.

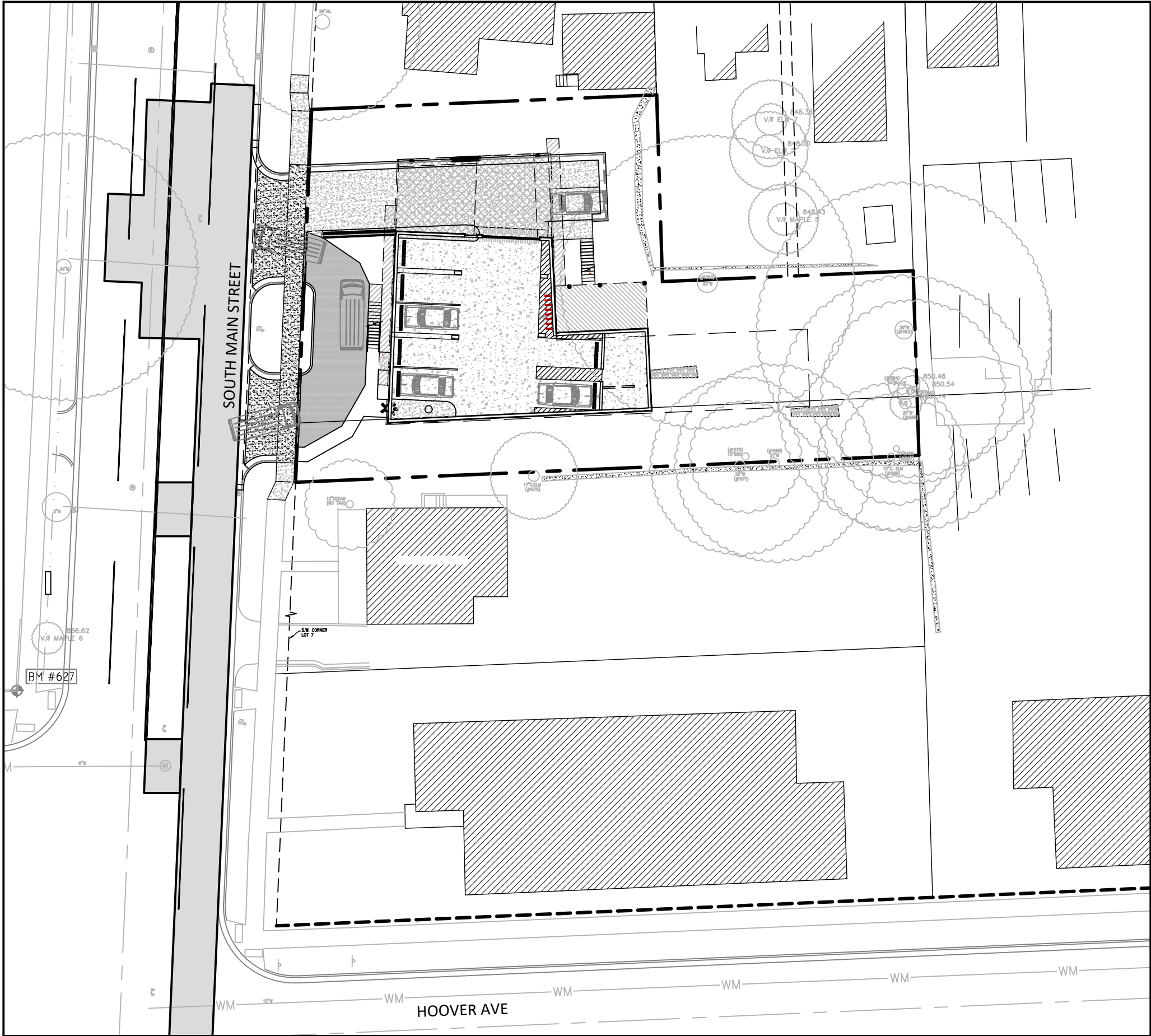
CONSTRUCTION NOTES

THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING NOTES AND ANY WORK INVOLVED SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT:

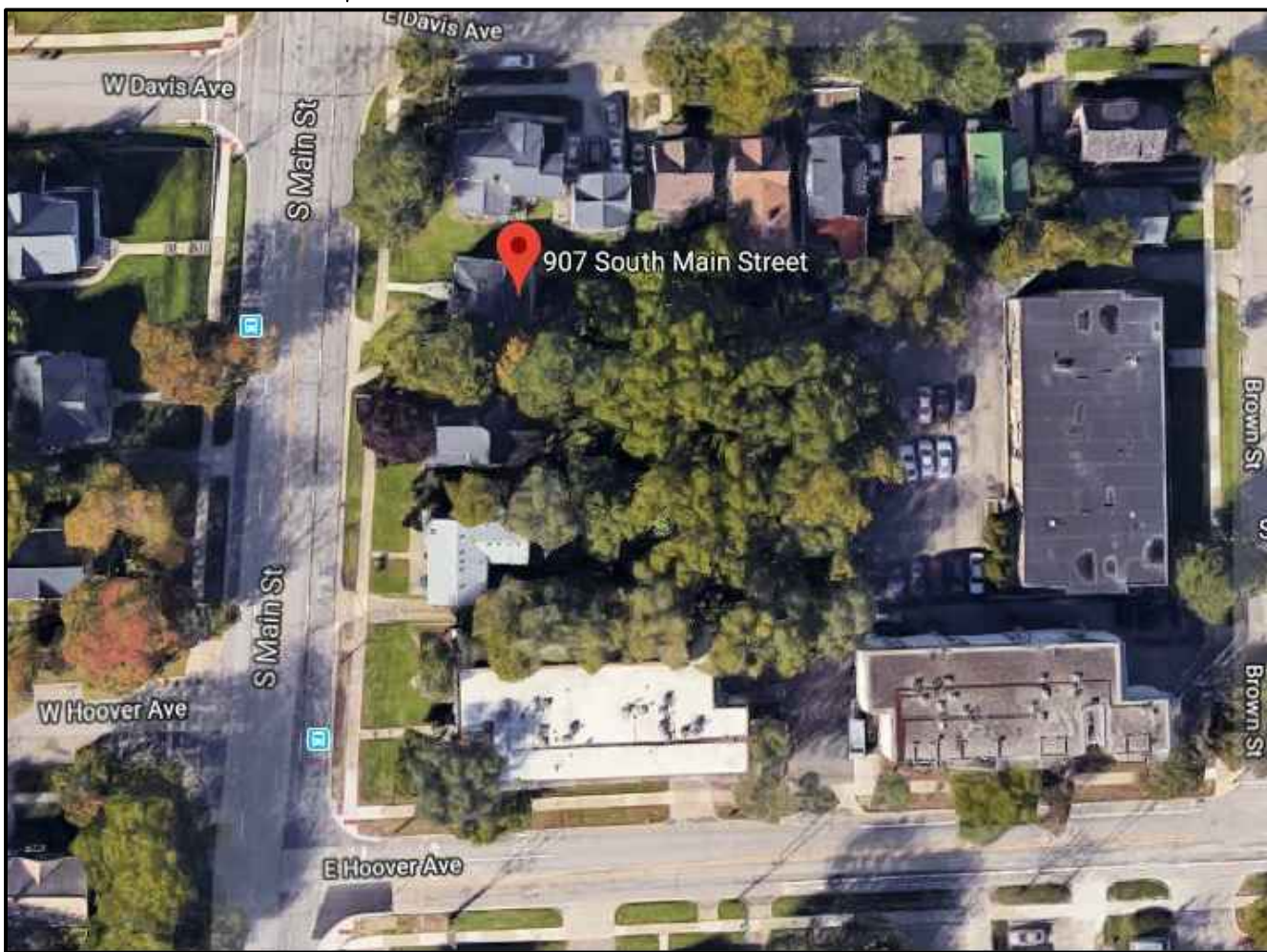
- DO NOT SCALE THESE DRAWINGS AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
- A GRADING PERMIT FOR SOIL EROSION-SEDIMENTATION CONTROL SHALL BE OBTAINED FROM THE GOVERNING AGENCY PRIOR TO THE START OF CONSTRUCTION.
- IF DUST PROBLEM OCCURS DURING CONSTRUCTION, CONTROL WILL BE PROVIDED BY AN APPLICATION OF WATER, EITHER BY SPRINKLER OR TANK TRUCK.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED MUNICIPAL COUNTY, AND STATE OF MICHIGAN PERMITS.
- PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED.
- ALL BARRIER-FREE FEATURES SHALL BE CONSTRUCTED TO MEET ALL LOCAL, STATE AND FEDERAL A.D.A. REQUIREMENTS.
- ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND RIGHTS-OF-WAY, PUBLIC OR PRIVATE, PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WITH ALL OWNERS TO DETERMINE THE LOCATION OF EXISTING LANDSCAPING, IRRIGATION LINES & PRIVATE UTILITY LINES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING LANDSCAPING, LAWNS, FENCING, IRRIGATION LINES, AND/OR PUBLIC OR PRIVATE UTILITIES THAT ARE TO BE PRESERVED AND/OR BEYOND THE CONSTRUCTION LIMITS.
- THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKERS AND PUBLIC SHALL BE PROTECTED FROM INJURY, & ADJOINING PROPERTY PROTECTED FROM DAMAGE.
- THE CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT THE END OF EACH WORK DAY.
- THE CONTRACTOR SHALL CALL MISS DIG A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- ALL EXCAVATION UNDER OR WITHIN 3 FEET OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (MDOT CLASS II) OR AS PER MUNICIPAL REQUIREMENTS.
- ALL PAVEMENT REPLACEMENT AND OTHER WORKS COVERED BY THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY INCLUDING THE LATEST MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY DELAY OR INCONVENIENCE DUE TO THE MATERIAL SHORTAGES OR RESPONSIBLE DELAYS DUE TO THE OPERATIONS OF SUCH OTHER PARTIES DOING WORK INDICATED OR SHOWN ON THE PLANS OR IN THE SPECIFICATION OR FOR ANY REASONABLE DELAYS IN CONSTRUCTION DUE TO THE ENCOUNTERING OR EXISTING UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.
- DURING THE CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH PROPERTY OWNERS ADJACENT TO THE PROJECT.
- IF WORK EXTENDS BEYOND NOVEMBER 15TH, NO COMPENSATION WILL BE DUE TO THE CONTRACTOR FOR ANY WINTER PROTECTION MEASURES THAT MAY BE REQUIRED BY THE ENGINEER.
- NO TREES ARE TO BE REMOVED UNTIL MARKED IN THE FIELD BY THE ENGINEER.
- ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE NORMAL CONSTRUCTION LIMITS OF THE PROJECT SHALL BE SODDED OR SEEDED AS DIRECTED BY THE ENGINEER.
- ALL ROOTS, STUMPS AND OTHER OBJECTIONABLE MATERIALS SHALL BE REMOVED AND THE HOLE BACKFILLED WITH SUITABLE MATERIAL. WHERE GRADE CORRECTION IS REQUIRED, THE SUBGRADE SHALL BE CUT TO CONFORM TO THE CROSS-SECTION AS SHOWN IN THE PLANS.
- TRAFFIC SHALL BE MAINTAINED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SIGNS AND TRAFFIC CONTROL DEVICES. FLAG PERSONS SHALL BE PROVIDED BY THE CONTRACTOR IF DETERMINED NECESSARY BY THE ENGINEER. ALL SIGNS SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AT NO COST TO THE MUNICIPALITY. NO WORK SHALL BE COMPLETED UNLESS THE APPROPRIATE TRAFFIC CONTROL DEVICES ARE IN PLACE.
- ALL DEMOLISHED MATERIALS & SOIL SPOILS SHALL BE REMOVED FROM THE SITE AT NO ADDITIONAL COST, & DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE & FEDERAL REGULATIONS.
- AFTER REMOVAL OF TOPSOIL, THE SUBGRADE SHALL BE COMPACTED TO 95% OF ITS UNIT WEIGHT, UNLESS OTHERWISE DIRECTED.
- ALL GRADING IN THE PLANS SHALL BE COMPLETED AS PART OF THIS CONTRACT. ALL DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SUBGRADE PRIOR TO COMPACTING.
- NO SEEDING SHALL BE COMPLETED AFTER OCTOBER 15TH WITHOUT APPROVAL OF THE ENGINEER.
- ANY EXISTING APPURTENANCES SUCH AS MANHOLES, GATE VALVES, ETC. SHALL BE ADJUSTED TO THE PROPOSED GRADE & SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- SOIL EROSION MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.
- ALL PERMANENT SIGNS & PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MICHIGAN MUTCD MANUAL.

INDEMNIFICATION STATEMENT

THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUBCONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.

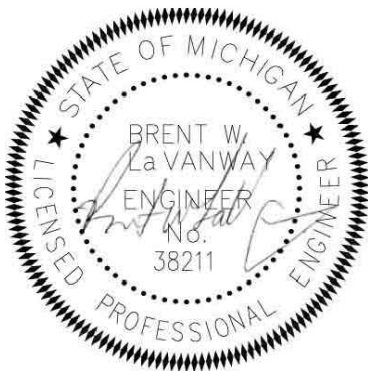


OVERALL SITE MAP
SCALE: 1" = 30'



PREPARED BY:

BEBOSS
Engineering
Engineers Surveyors Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
517.546.4836 FAX 517.548.1670
CONTACT: PATRICK CLEARY



AERIAL IMAGE

NOT TO SCALE

ARCHITECT:

BmK DESIGN+PLANNING LLC
122 S. LAUREL ST.
ROYAL OAK, MI 48067
CONTACT: SATCH CHADA
PHONE: (917) 288-4388
SRCOHO@GMAIL.COM
KMB@BMKDP.COM



LANDOWNER/PREPARED FOR:
NEST CAPITAL MANAGEMENT LLC
393 W. BROADWAY 3RD FLOOR
NEW YORK, NY 10012
CONTACT: SATCH CHADA
PHONE: (917) 288-4388
SRCOHO@GMAIL.COM

LAND INTEREST STATEMENT:

LANDOWNER OF 907 SOUTH MAIN IS MAIN+DAVIS LLC. LANDOWNER OF 913 SOUTH MAIN IS SATYANARAYAN CHADA AND CHADA N REDDY. NEST CAPITAL MANAGEMENT LLC NEW YORK, NEW YORK IS FULLY AUTHORIZED BY THE OWNERS TO ACT ON THEIR BEHALF WITHOUT RESTRICTION

PROPOSED DEVELOPMENT PROGRAM SUMMARY:

LAND USE IS PROPOSED TO CONTINUE TO BE UTILIZED AS A MULTI-FAMILY/STUDENT-ORIENTED HOUSING BUT TO A HIGHER DENSITY. PROJECT WILL INCLUDE THE DEMOLITION OF 2 STUDENT-RENTAL HOUSES AND CONSTRUCTION OF A NEW 3-STORY, 6 UNIT, 2,934 SQFT FOOTPRINT STUDENT-RENTAL APARTMENT BUILDING. ACCESS WILL CONTINUE TO BE DIRECTLY OFF SOUTH MAIN STREET FROM A CONSOLIDATED SINGLE DRIVE, SHIFTED APPROXIMATELY 16-FT TO THE NORTH FROM ITS EXISTING LOCATION. VEHICULAR AND BICYCLE PARKING WILL BE OFF-STREET IN AN ENCLOSED UNDERGROUND STRUCTURE. ENTIRE PROJECT IS TO BE CONSTRUCTED AS A SINGLE PHASE. CONSTRUCTION COST TBD.

COMMUNITY ANALYSIS:

DEVELOPMENT WILL HAVE MINIMAL IMPACT ON THE SURROUNDING COMMUNITY AND SCHOOLS. THE EXISTING AREA IS GENERALLY COMPRISED OF SINGLE-FAMILY TYPE STUDENT-ORIENTED RENTAL HOMES AND MULTI-FAMILY APARTMENTS, PARTICULARLY EAST OF MAIN STREET. THE RELATIONSHIP OF THE PROPOSED CONTINUED MULTI-FAMILY/STUDENT-ORIENTED HOUSING USE WILL NOT CHANGE WITH RESPECT TO THE EXISTING SURROUNDING SIMILAR USES.

THE AIR AND WATER QUALITY RESULTING FROM THE NEW DEVELOPMENT WILL BE IMPROVED THROUGH ENHANCED SUSTAINABILITY FEATURES TO INCLUDE BUT NOT LIMITED TO IMPROVED STORM WATER CONTROL, INSTALLATION OF SOLAR PANELS, LANDSCAPING WITH MICHIGAN NATIVE PLANTS (AND REMOVAL OF EXISTING INVASIVE SPECIES), RAINWATER RECAPTURE SYSTEM FOR IRRIGATION, AND SUPERIOR ENERGY EFFICIENCY AND BUILDING MATERIALS.

THE OLD WEST SIDE HISTORIC DISTRICT IS ACROSS SOUTH MAIN STREET FROM THE DEVELOPMENT (PAULINE & MAIN STREET DISTRICT BORDER) BUT THERE ARE NO NEARBY HISTORIC STRUCTURES TO THE DEVELOPMENT SITE THAT COULD BE IMPACTED.

NATURAL FEATURES ON THE EXISTING SITE INCLUDE SEVERAL LARGE MATURE TREES, PRIMARILY WALNUT AND AILANTHUS (TREE-OF-HEAVEN), AND PRIMARILY AROUND THE PERIMETER OF THE SITE. TREES INCLUDE 6 OF LANDMARK SIZE. AS THEY ARE ALONG THE SITE PERIMETER AND WITHIN THE SETBACK MOST OF THE TREES WILL BE PRESERVED. FOUR (4) AILANTHUS (INVASIVE), ONE (1) LANDMARK-SIZE (20") SILVER MAPLE (DEAD) WILL BE REMOVED. IN ADDITION ONE (1) 14" BLACK WALNUT AND ONE (1) 9" SILVER MAPLE IN VERY POOR CONDITION (SEE ARBORIST REPORT) WILL ALSO BE REMOVED AS PART OF THE CONSTRUCTION.

PRE-, PERI-, AND POST-MITIGATION EFFORTS OF SURROUNDING GROUND CONDITIONS AROUND LANDMARK TREES WILL MAXIMIZE TREE RESILIENCY AND GROWTH. THESE EFFORTS TO INCLUDE, BUT NOT LIMITED TO, MAINTAINING ORANGE FENCING (MINIMUM OF 6-FT) AROUND THE TRUNK, USE OF WOOD MULCH TO REDUCE COMPACTION WITHIN THE CRITICAL ROOT ZONE; VERTICAL MULCHING TO DE-COMPACT SOILS POST CONSTRUCTION, AND DEEP ROOT FEEDING TO PROMOTE NEW ROOT GROWTH.

THERE ARE NO WETLANDS, WATER COURSES, OR KNOWN ENDANGERED SPECIES HABITAT ON SITE. SEVERAL LOW STONE OR BROKEN-CONCRETE RETAINING WALLS ON SITE WILL EITHER BE RECONSTRUCTED OR PRESERVED. REFER TO THE NATURAL FEATURES PLAN FOR ADDITIONAL INFORMATION.

PUBLIC SIDEWALK MAINTENANCE STATEMENT:

THE EXISTING PUBLIC SIDEWALK ALONG SOUTH MAIN STREET WILL BE REPLACED WHERE REQUIRED FOR REMOVAL OF EXISTING DRIVEWAYS CONSTRUCTION OF THE NEW DRIVEWAY, AND UTILITY INSTALLATIONS. PRIOR TO ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY ANY REMAINING SIDEWALK IN NEED OF REPAIR MUST BE REPAIRED IN ACCORDANCE WITH CITY STANDARDS. ALL SIDEWALKS SHALL BE MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND ADJACENT TO AND ABUTTING THE SAME.

SETBACK NOTES:

- * REAR SETBACK
53'-0" - 50'-0" = 3' 1.5" = 4'-1/2" (30'-4 1/2" REAR SETBACK REQUIRED)
30'-5" REAR SETBACK PROVIDED
- ** SIDE SETBACK
73'-6" - 50'-0" = 23'-6" X 1.5" = 2'-10 1/2" (14'-10 1/2" SIDE SETBACKS REQ'D)
15'-0" SIDE SETBACKS PROVIDED

TRAFFIC STATEMENT:

VEHICLE TRIP GENERATION COMPARATIVE SUMMARY*																					
AND USE DESCRIPTION*	ITE CAT.*	BEDS / UNIT	UNIT	TOTAL GENERATED TRIPS																REMARKS	
				WEEKDAY TOTAL			SATURDAY TOTAL			SUNDAY TOTAL			WKDAY AM PEAK (7-9AM)			WKDAY PM PEAK (4-6PM)					
				TRIPS			TRIPS			TRIPS			TRIPS			TRIPS					
				TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT			
				TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT			
PASSENGER CAR																					
PROPOSED BUILDING - 3 STORIES																					
MULTI-FAMILY (LOW-RISE BUILDING)**	220	6.0	6.0	87.84	43.92	43.92	97.68	48.84	48.84	75.36	37.68	37.68	5.52	1.27	4.25	6.72	4.23	2.49	PEAKS & TOTALS FOR 6 DWELLING UNIT BUILDING TOTAL		
ENTERING (%) / EXITING (%)				100.0%	50.0%	50.0%	100.0%	50.0%	50.0%	100.0%	50.0%	50.0%	100.0%	23.0%	77.0%	100.0%	63.0%	37.0%	WEIGHTED AVERAGE	***	
NET TRIP GENERATION SUMMARY				87.84	43.92	43.92	97.68	48.84	48.84	75.36	37.68	37.68	5.52	1.27	4.25	6.72	4.23	2.49			
PER UNIT				6.0	1.0	1.0	14.6	7.32	7.32	16.3	8.14	8.14	12.6	6.28	6.28	0.9	0.21	0.71	1.1	0.71	0.41

* TRIP DATA PER INSTITUTE OF TRAFFIC ENGINEERS (ITE) TRIP GENERATION MANUAL 10TH EDITION

** BASE ITE STUDY PER DWELLING UNIT AT AVG OF 2.72 RESIDENTS / UNIT - PROPOSED AT 6 BEDS (RESIDENTS) / UNIT THEREFORE DOUBLED TRIP NUMBERS FOR BETTER DATA REPRESENTATION

*** TOTALS UNDER TRANSPORTATION IMPACT ANALYSIS (TIA) THRESHOLD OF 3 TRIPS / UNIT / PEAK HOUR OR 50 TOTAL TRIPS / PEAK HOUR

SHEET INDEX	
SHEET NO.	DESCRIPTION
C1	CIVIL DRAWINGS
C2A	COVER SHEET
C2B	EXISTING CONDITIONS PLAN
C3	ALTA SURVEY PLAN
C4	DIMENSIONAL LAYOUT PLAN (NOTE: SEE ARCHITECTURAL FOR RENDERING)
C5	NATURAL FEATURES PLAN (WITH TREE INVENTORY)
C5A	SITE DEMOLITION PLAN
C5B	NATURAL FEATURES OVERLAY PLAN (WITH DEMOLITIONS)
C5C	PLANNING / NATURAL FEATURES ALTERNATIVES ANALYSIS
C6A	LANDSCAPE PLAN
C6B	LANDSCAPE PLAN DETAILS & SPECIFICATIONS
C7	UTILITY PLAN, STORMWATER CALCULATIONS & NARRATIVE
C8A	GRADING & STORMWATER MANAGEMENT PLAN
C8B	SOIL EROSION & SEDIMENT CONTROL PLAN
C8C	EROSION CONTROL & MISC. CONST. DETAILS
C8D	STORMWATER CALCULATIONS (WASHTENAW COUNTY SECTION IV)
C8E	STORMWATER CONSTRUCTION DETAILS
C8F	STORMWATER TANK & PUMP CONSTRUCTION DETAILS
C9A	SIGHT DISTANCE ANALYSIS PLAN (1)
C9B	SIGHT DISTANCE ANALYSIS PLAN (2)
C9C	LOADING ANALYSIS / CIRCULATION PLAN
G100	ARCHITECTURAL DRAWINGS
G100	GENERAL INFORMATION
A100	OVERALL FLOOR PLANS
A200	ENLARGED FLOOR PLANS - UNITS 1 & 2
A201	ENLARGED FLOOR PLANS - UNITS 3 & 4
A202	ENLARGED FLOOR PLANS - UNITS 5 & 6
A203	ROOF PLAN
A300	EXTERIOR ELEVATIONS - SOUTH & WEST
A301	EXTERIOR ELEVATIONS - NORTH & EAST
A400	EXTERIOR RENDERINGS
A500	BUILDING SECTIONS
A501	ENLARGED BICYCLE / TRASH AREA

SITE DATA COMPARISON CHART				
DESCRIPTION	EXISTING	REQUIRED / ALLOWED	PROPOSED	
	907 S. MAIN	913 S. MAIN	-	COMBINED PROPERTIES
ZONING	R4C MULTI-FAMILY RESIDENTIAL (NO CHANGE)			
ADJACENT ZONING	R4C MULTI-FAMILY RESIDENTIAL (ALL)			
USE	STUDENT APT.	SINGLE - FAMILY	STUDENT APT.	STUDENT APT.
BEDS / DWELLING UNIT	4 / UNIT	-	MAX 6 / UNIT	6 / UNIT
NO. OF UNITS	1	1	-	6 UNITS 35 TOTAL BEDS
TOTAL BLDG AREA (FOOTPRINT)	1,032 GSF	1,386 GSF	-	2,934 GSF (3,258 GSF W/ ELEV. PORTION)
TOTAL FLOOR AREA (STORIES)	2,064 GSF (2 STORIES)	2,772 GSF (2 STORIES)	-	13,467 GSF (3 STORIES)
LOT AREA	4,966 SQ FT (0.114 AC)	8,843 SQ FT (0.203 AC)	8,500 SQ FT	13,992 SQ FT (0.32 AC) (COMBINED)
DENSITY (DWELLING UNITS / AC)	8.77	4.93	MAX 20	18.75
LOT AREA / DWELLING UNIT	4,966 SQ FT	8,843 SQ FT	MIN 2,175 SQ FT	2,332 SQ FT
OPEN SPACE (% OF LOT AREA)	79%	84%	MIN 40%	79%
ACTIVE OPEN SPACE (PER DWELLING UNIT)	-	-	MIN 300 SQ FT	2,812 SQ FT TOTAL
LOT WIDTH	104.11-FT (COMBINED PARCEL)		MIN 60-FT	104.11-FT
BLDG HEIGHT	20-FT +	30-FT +	MAX 30-FT	30-FT
FRONT SETBACK	25.27-FT	17.15-FT	MIN 25-FT	24.5 FT (W / LOT AVERAGING)
REAR SETBACK *	40.48-FT	110.27-FT	MIN 30-FT	74.4-FT
NORTH SIDE SETBACK C.L.U.B. **	8.81-FT 12.70-FT	12.70-FT 14.24-FT	MIN 12-FT MIN 12-FT MIN 15-FT	15.0-FT (UPPER) 28.21-FT (LOWER) 15.0-FT 15.0-FT

PARKING CALCULATIONS:

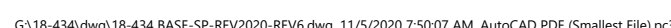
R4C ZONING: 1.5 VEHICLE SPACES / DWELLING UNIT
+ 1 BIKE SPACE / 5 UNITS (50% CLASS 'A' & 50% CLASS 'C')
6 UNITS = 9 VEHICLE SPACES + 2 BIKE SPACES REQUIRED
9 VEHICLE SPACES (7' SUB-GRADE & 2' EXTERIOR) + 8 CLASS 'A' BIKE SPACES PROVIDED (NO BARRIER-FREE SPACES REQUIRED/PROVIDED - NO TYPE 'A' OR 'B' UNITS PROVIDED FOR DEVELOPMENT)

5	PC	CITY NR REVIEW COMMENTS	11-5-20
4	PC	CITY REVIEW COMMENTS	10-15-20
3	PC	CITY REVIEW COMMENTS	9-11-20
2	PC	CITY REVIEW COMMENTS	7-20-20
1	PC	CITY REVIEW COMMENTS	6-5-20
NO	BY	REVISION	DATE

C1

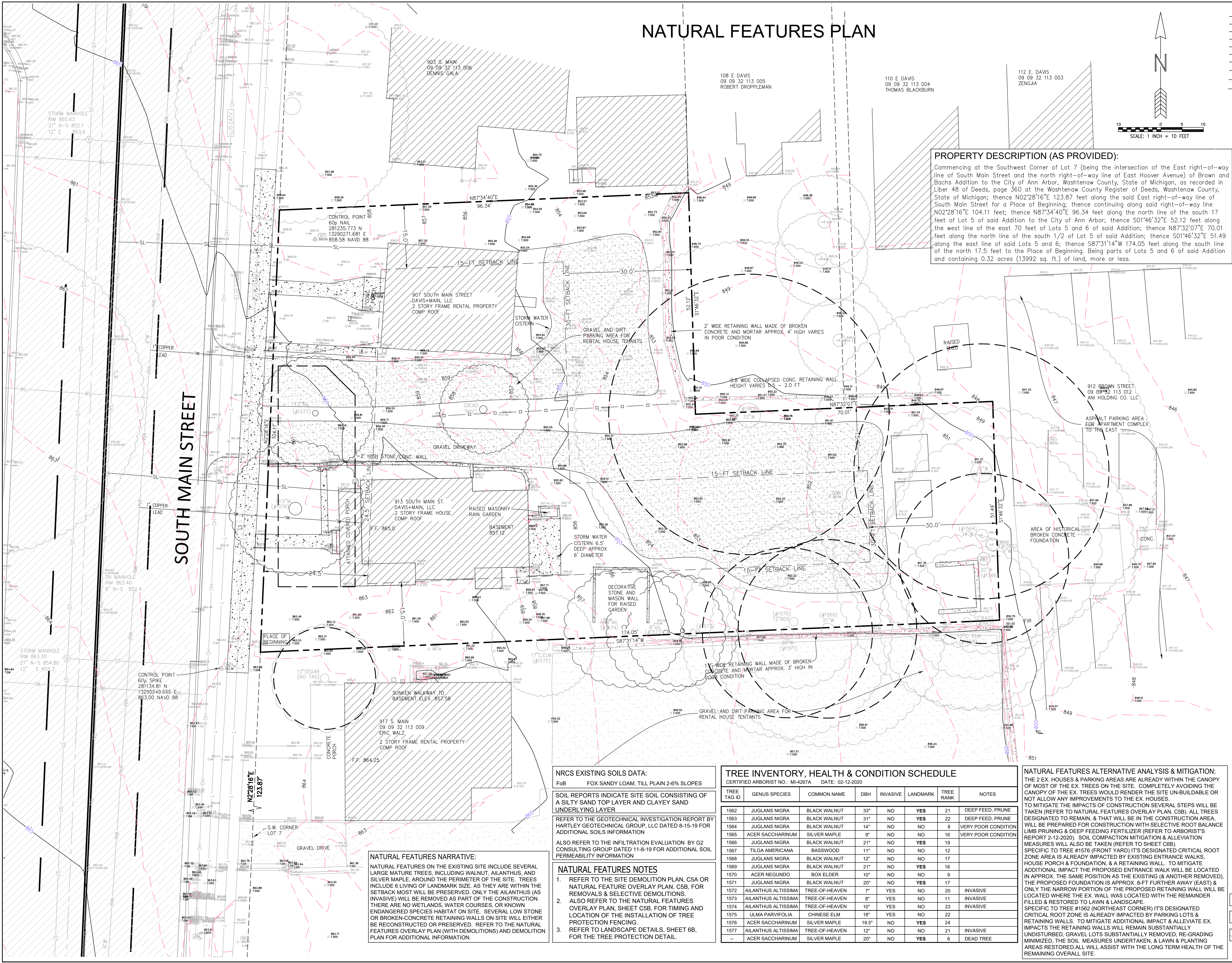
ISSUE DATE: 4-10-20

JOB NO. 18-434





NATURAL FEATURES PLAN



PROPERTY DESCRIPTION (AS PROVIDED):
Commencing at the Southwest Corner of Lot 7 (being the intersection of the East right-of-way line of South Main Street and the north right-of-way line of East Hoover Avenue) of Brown and Bachs Addition to the City of Ann Arbor, Washtenaw County, State of Michigan, as recorded in Liber 48 of Deeds, page 360 at the Washtenaw County Register of Deeds, Washtenaw County, State of Michigan; thence N02°28'16"E 123.87 feet along the said East right-of-way line of South Main Street for a Place of Beginning; thence continuing along said right-of-way line N02°28'16"E 104.11 feet; thence N87°34'40"E 96.34 feet along the north line of the south 17 feet of Lot 5 of said Addition to the City of Ann Arbor; thence S01°46'32"E 52.12 feet along the west line of the east 70 feet of Lots 5 and 6 of said Addition; thence N87°32'07"E 70.01 feet along the north line of the south 1/2 of Lot 5 of said Addition; thence S01°46'32"E 51.49 feet along the east line of said Lots 5 and 6; thence S87°31'14"W 174.05 feet along the south line of the north 17.5 feet to the Place of Beginning. Being parts of Lots 5 and 6 of said Addition and containing 0.32 acres (13992 sq. ft.) of land, more or less.

- LINE LEGEND:**
- ELECTRIC LINE
 - GAS MAIN
 - WATER MAIN
 - STORM LINE
 - SANITARY LINE
 - CABLE TV LINE
 - PHONE LINE
 - CHAIN LINK FENCE
 - WOOD FENCE
 - BARBED WIRE FENCE

- TREE LEGEND:**
- AP APPLE
 - AIL ALANTHUS
 - BAS BASSWOOD
 - BB BURNING BUSH
 - BE BOX ELDER
 - BIR BIRCH
 - CA CRAB APPLE
 - CAT CATALPA
 - CH CHERRY
 - CN CONIFEROUS SHRUB
 - CW COTTONWOOD
 - DS DECIDUOUS SHRUB
 - DT DECIDUOUS TREE
 - HICK HICKORY
 - JP JAPANESE PAGODA
 - LOC LOCUST
 - M MAPLE
 - P PINE
 - SAS SASSAFRAS
 - SP SPRUCE
 - SYC SYCAMORE
 - WIL WILLOW
 - W WALNUT

- STRUCTURE LEGEND:**
- STORM MARKING
 - YARD DRAIN
 - BEEHIVE CATCH BASIN
 - ROUND CATCH BASIN
 - SQUARE CATCH BASIN
 - STORM MANHOLE
 - CULVERT/END SECTION
 - DOWN SPOUT
 - STORM CLEAN-OUT
 - OUTLET CONTROL STRUCTURE
 - WATER MANHOLE
 - FIRE HYDRANT
 - GATE VALVE & BOX
 - WATER SHUT OFF VALVE
 - WELL
 - POST INDICATOR VALVE
 - SPOUT / HOSE BIB
 - POST INDICATOR VALVE
 - WATER MARKER
 - MONITORING WELL
 - GAS MANHOLE
 - GAS RISER
 - GAS METER
 - GAS VALVE
 - GAS BLOW OFF
 - GAS STOP BOX
 - GAS MARKING
 - TELEPHONE POLE
 - COMMUNICATION MARKING
 - COMMUNICATION HAND HOLE
 - COMMUNICATION MANHOLE
 - TELEPHONE RISER
 - POLICE/EMERGENCY CALL
 - ELECTRIC MANHOLE
 - ELECTRIC MANHOLE
 - LIGHT POLE
 - GUY POLE
 - POWER POLE
 - UTILITY POLE
 - GUY ANCHOR
 - ELECTRIC RISER
 - TRANSFORMER
 - ELECTRIC HAND HOLE
 - ELECTRIC MARKING
 - TRAFFIC SIGNAL POST
 - SANITARY MANHOLE
 - SANITARY CLEAN-OUT
 - SANITARY MARK
 - BOLLARD
 - ANTENNA
 - STATUE / SCULPTURE
 - AC UNIT
 - PARKING METER
 - SIGN
 - MAILBOX
 - FLAG POLE
 - ROCK/BOULDER
 - BASKETBALL POST

- NATURAL FEATURES ALTERNATIVE ANALYSIS & MITIGATION:**
THE 2 EX. HOUSES & PARKING AREAS ARE ALREADY WITHIN THE CANOPY OF MOST OF THE EX. TREES ON THE SITE. COMPLETELY AVOIDING THE CANOPY OF THE EX. TREES WOULD RENDER THE SITE UN-BUILDABLE OR NOT ALLOW ANY IMPROVEMENTS TO THE EX. HOUSES.
TO MITIGATE THE IMPACTS OF CONSTRUCTION SEVERAL STEPS WILL BE TAKEN (REFER TO NATURAL FEATURES OVERLAY PLAN, CSB). ALL TREES DESIGNATED TO REMAIN, & THAT WILL BE IN THE CONSTRUCTION AREA, WILL BE PREPARED FOR CONSTRUCTION WITH SELECTIVE ROOT BALANCE LIMB PRUNING & DEEP FEEDING FERTILIZER (REFER TO ARBORIST'S REPORT 2-12-2020). SOIL COMPACTION MITIGATION & ALLEVATION MEASURES WILL ALSO BE TAKEN (REFER TO SHEET C6B).
SPECIFIC TO TREE #1576 (FRONT YARD) ITS DESIGNATED CRITICAL ROOT ZONE AREA IS ALREADY IMPACTED BY EXISTING ENTRANCE WALKS, HOUSE PORCH & FOUNDATION, & A RETAINING WALL. TO MITIGATE ADDITIONAL IMPACT THE PROPOSED ENTRANCE WALK WILL BE LOCATED IN APPROX. THE SAME POSITION AS THE EXISTING (& ANOTHER REMOVED), THE PROPOSED FOUNDATION IS APPROX. 8-FT FURTHER AWAY (EAST) & ONLY THE NARROW PORTION OF THE PROPOSED RETAINING WALL WILL BE LOCATED WHERE THE EX. WALL WAS LOCATED WITH THE REMAINDER FILLED & RESTORED TO LAWN & LANDSCAPE.
SPECIFIC TO TREE #1562 (NORTHEAST CORNER) ITS DESIGNATED CRITICAL ROOT ZONE IS ALREADY IMPACTED BY PARKING LOTS & RETAINING WALLS. TO MITIGATE ADDITIONAL IMPACT & ALLEVATE EX. IMPACTS THE RETAINING WALLS WILL REMAIN SUBSTANTIALLY UNDISTURBED. GRAVEL LOTS SUBSTANTIALLY REMOVED, RE-GRADING MINIMIZED, THE SOIL MEASURES UNDERTAKEN, & LAWN & PLANTING AREAS RESTORED ALL WILL ASSIST WITH THE LONG TERM HEALTH OF THE REMAINING OVERALL SITE.

NRCS EXISTING SOILS DATA:
FoB FOX SANDY LOAM, TILL PLAIN 2-6% SLOPES

SOIL REPORTS INDICATE SITE SOIL CONSISTING OF A SILTY SAND TOP LAYER AND CLAYEY SAND UNDERLYING LAYER

REFER TO THE GEOTECHNICAL INVESTIGATION REPORT BY HARTLEY GEOTECHNICAL GROUP, LLC DATED 8-15-19 FOR ADDITIONAL SOILS INFORMATION

ALSO REFER TO THE INFILTRATION EVALUATION BY G2 CONSULTING GROUP DATED 11-8-19 FOR ADDITIONAL SOIL PERMEABILITY INFORMATION

- NATURAL FEATURES NARRATIVE:**
NATURAL FEATURES ON THE EXISTING SITE INCLUDE SEVERAL LARGE MATURE TREES, INCLUDING WALNUT, ALANTHUS, AND SILVER MAPLE, AROUND THE PERIMETER OF THE SITE. TREES INCLUDE 6 LIVING OF LANDMARK SIZE, AS THEY ARE WITHIN THE SETBACK MOST WILL BE PRESERVED. ONLY THE ALANTHUS (AS INVASIVE) WILL BE REMOVED AS PART OF THE CONSTRUCTION. THERE ARE NO WETLANDS, WATER COURSES, OR KNOWN ENDANGERED SPECIES HABITAT ON SITE. SEVERAL LOW STONE OR BROKEN-CONCRETE RETAINING WALLS ON SITE WILL EITHER BE RECONSTRUCTED OR PRESERVED. REFER TO THE NATURAL FEATURES OVERLAY PLAN (WITH DEMOLITIONS) AND DEMOLITION PLAN FOR ADDITIONAL INFORMATION.
- REFER TO THE SITE DEMOLITION PLAN, CSA OR NATURAL FEATURE OVERLAY PLAN, CSB, FOR REMOVALS & SELECTIVE DEMOLITIONS.
 - ALSO REFER TO THE NATURAL FEATURES OVERLAY PLAN, SHEET C6B, FOR TIMING AND LOCATION OF THE INSTALLATION OF TREE PROTECTION FENCING.
 - REFER TO LANDSCAPE DETAILS, SHEET 6B, FOR THE TREE PROTECTION DETAIL.

TREE INVENTORY, HEALTH & CONDITION SCHEDULE							
CERTIFIED ARBORIST NO.: MI-42674 DATE: 02-12-2020							
TREE TAG ID	GENUS SPECIES	COMMON NAME	DBH	INVASIVE	LANDMARK	TREE RANK	NOTES
1562	JUGLANS NIGRA	BLACK WALNUT	33"	NO	YES	21	DEEP FEED, PRUNE
1563	JUGLANS NIGRA	BLACK WALNUT	31"	NO	YES	22	DEEP FEED, PRUNE
1564	JUGLANS NIGRA	BLACK WALNUT	14"	NO	NO	8	VERY POOR CONDITION
1565	ACER SACCHARINUM	SILVER MAPLE	9"	NO	NO	16	VERY POOR CONDITION
1566	JUGLANS NIGRA	BLACK WALNUT	21"	NO	YES	19	
1567	TILIA AMERICANA	BASSWOOD	11"	NO	NO	12	
1568	JUGLANS NIGRA	BLACK WALNUT	12"	NO	NO	17	
1569	JUGLANS NIGRA	BLACK WALNUT	21"	NO	YES	16	
1570	ACER NEGUNDO	BOX ELDER	10"	NO	NO	9	
1571	JUGLANS NIGRA	BLACK WALNUT	20"	NO	YES	17	
1572	ALANTHUS ALTISSIMA	TREE-OF-HEAVEN	7"	YES	NO	20	INVASIVE
1573	ALANTHUS ALTISSIMA	TREE-OF-HEAVEN	8"	YES	NO	11	INVASIVE
1574	ALANTHUS ALTISSIMA	TREE-OF-HEAVEN	10"	YES	NO	23	INVASIVE
1575	ULMA PARVIFOLIA	CHINESE ELM	18"	YES	NO	22	INVASIVE
1576	ACER SACCHARINUM	SILVER MAPLE	19.5"	NO	YES	24	
1577	ALANTHUS ALTISSIMA	TREE-OF-HEAVEN	12"	NO	NO	21	INVASIVE
--	ACER SACCHARINUM	SILVER MAPLE	20"	NO	YES	6	DEAD TREE

ORIGINAL SURVEY BY:

Arbor Land Consultants Inc.
Professional Surveyors

2936 S. Main Road
Ann Arbor, MI 48103
Tel: 734.769.7771
Fax: 734.697.2961
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BEBOSS Engineering
Engineers Planners Landscape Architects

3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843

517.546.4836 FAX 517.548.1670

PROJECT: MAIN & DAVIS APARTMENTS

PREPARED FOR: NEST CAPITAL MANAGEMENT LLC
393 WEST BROADWAY 3RD FLOOR
NEW YORK, NEW YORK 10012
917-288-4388

TITLE: NATURAL FEATURES PLAN (WITH TREE INVENTORY)

DESIGNED BY: OTHERS

CHECKED BY: OTHERS

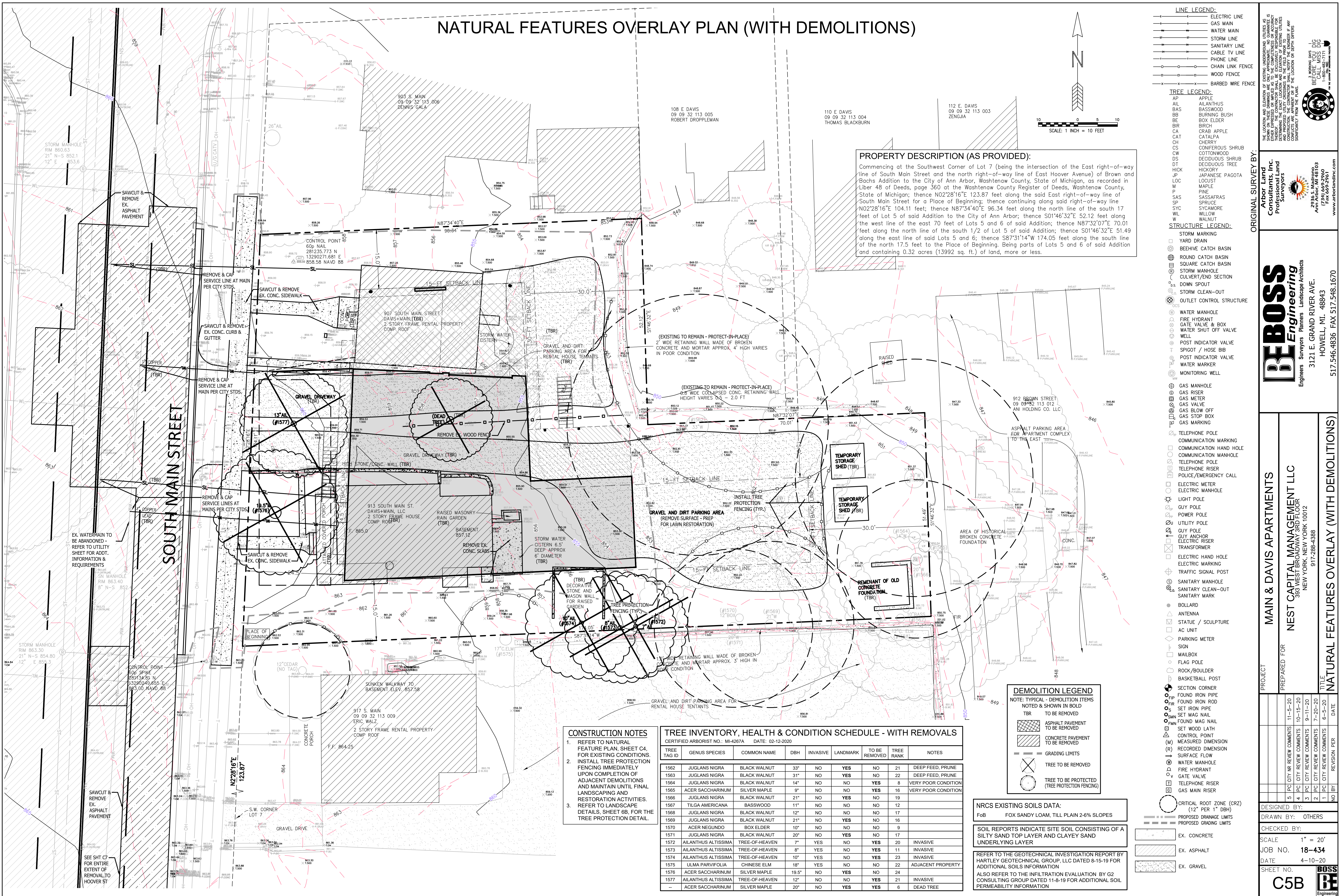
SCALE: 1" = 20'

JOB NO. 18-434

DATE 4-10-20

SHEET NO. C4

NATURAL FEATURES OVERLAY PLAN (WITH DEMOLITIONS)



ORIGINAL SURVEY BY:

Arbor Land Consultants, Inc. Professional Surveyors
2936 S. Main Road
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Fax: 734.771.7772
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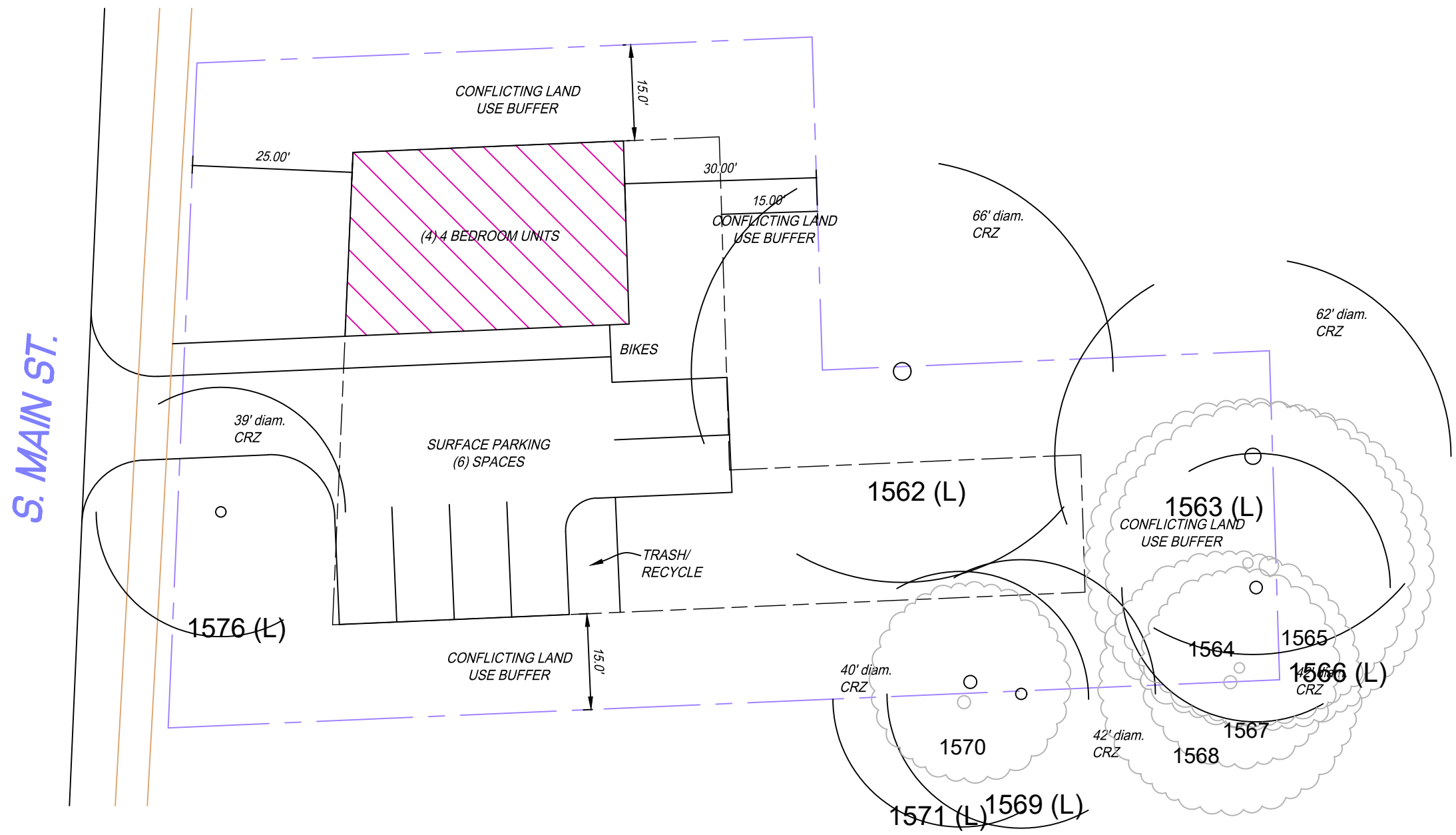
BEBOSS Engineering
Engineers Surveyors Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
517.546.4836 FAX 517.548.1670

PROJECT: MAIN & DAVIS APARTMENTS
PREPARED FOR: NEST CAPITAL MANAGEMENT LLC
393 WEST BROADWAY 3RD FLOOR
NEW YORK, NEW YORK 10012
917-288-4388

DATE	REVISION	PER
11-15-20	1	PC CITY REVIEW COMMENTS
10-15-20	2	PC CITY REVIEW COMMENTS
9-11-20	3	PC CITY REVIEW COMMENTS
7-20-20	4	PC CITY REVIEW COMMENTS
6-5-20	5	PC CITY REVIEW COMMENTS
11-15-20	5	PC CITY REVIEW COMMENTS

DESIGNED BY: OTHERS
CHECKED BY: OTHERS
SCALE: 1" = 20'
JOB NO. 18-434
DATE 4-10-20
SHEET NO. C5B

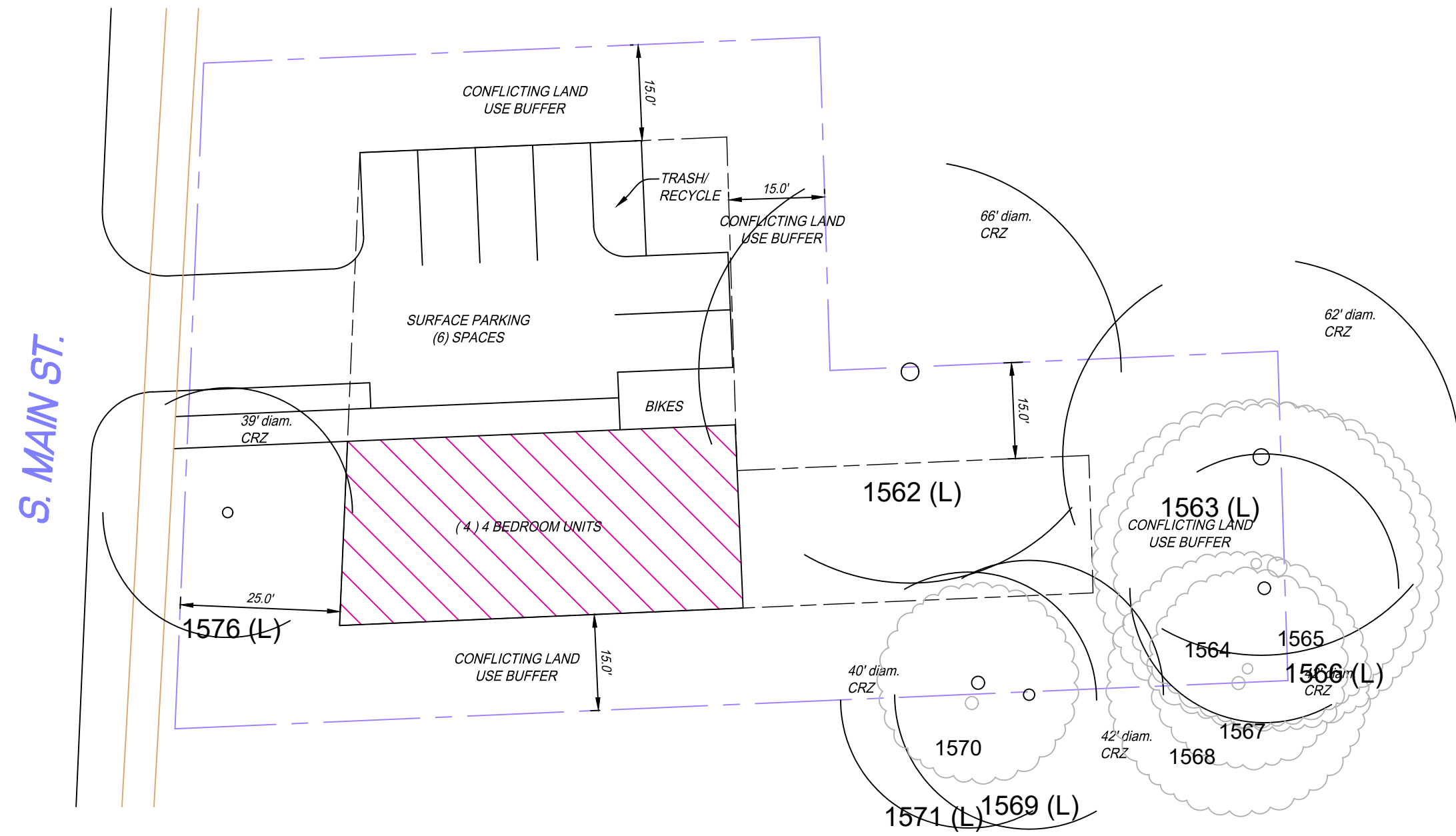
PLANNING / NATURAL FEATURES ALTERNATIVES ANALYSIS



alternate analysis plan 1

TOTAL EXISTING (LIVE) TREES ON-SITE:	15
EXISTING LANDMARK TREES:	6
EXISTING OTHER TREES (ON-SITE):	9
LANDMARK TREES TO BE REMOVED:	0
LANDMARK TREES TO REMAIN:	6
OTHER TREES TO BE REMOVED (INVASIVE):	4
OTHER TREES TO REMAIN:	5

SCALE: 1"=20.0'

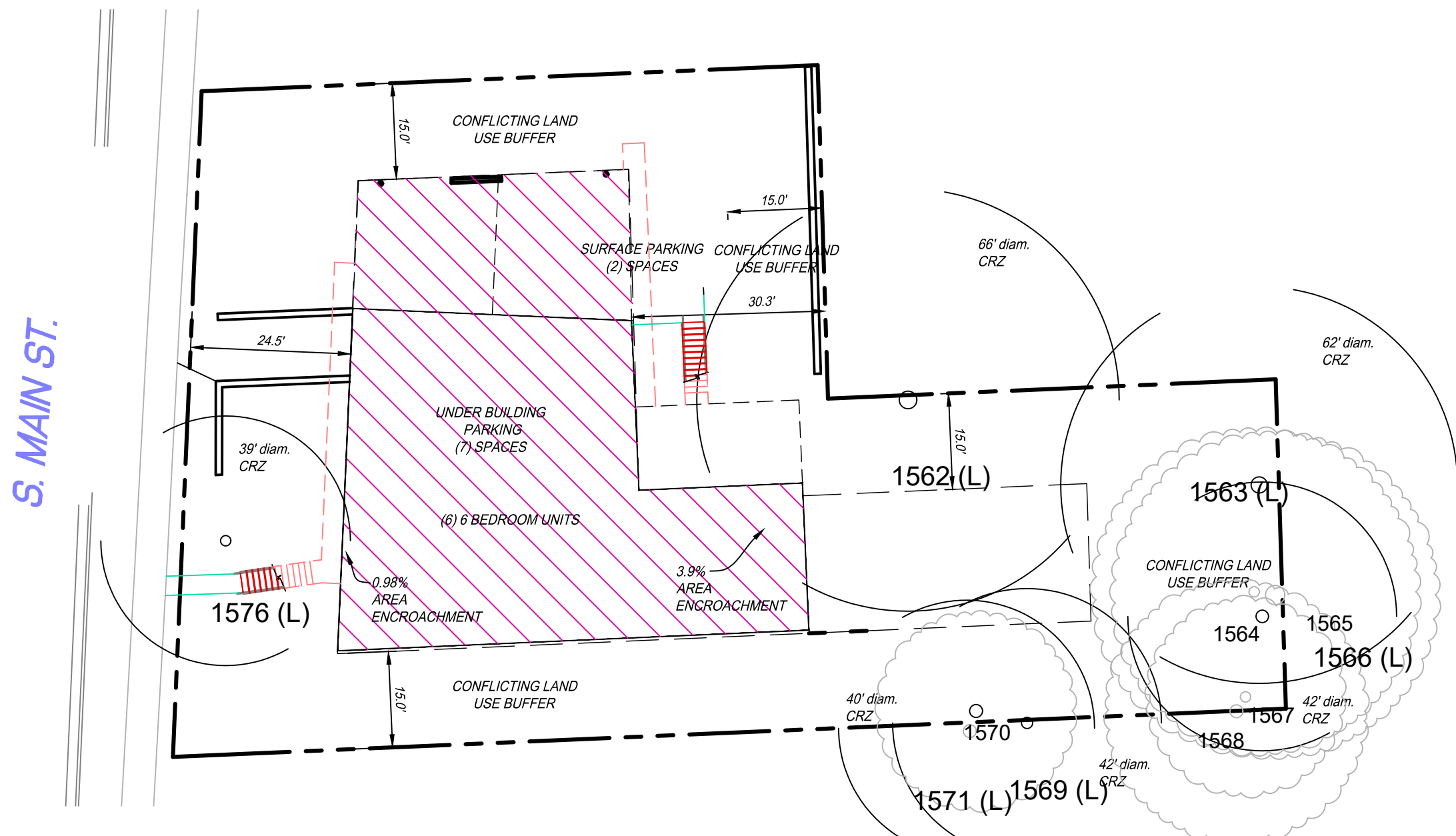


alternate analysis plan 2

TOTAL EXISTING (LIVE) TREES ON-SITE:	15
EXISTING LANDMARK TREES:	6
EXISTING OTHER TREES (ON-SITE):	9
LANDMARK TREES TO BE REMOVED:	0
LANDMARK TREES TO REMAIN:	6
OTHER TREES TO BE REMOVED (INVASIVE):	4
OTHER TREES TO REMAIN:	5

SCALE: 1"=20.0'

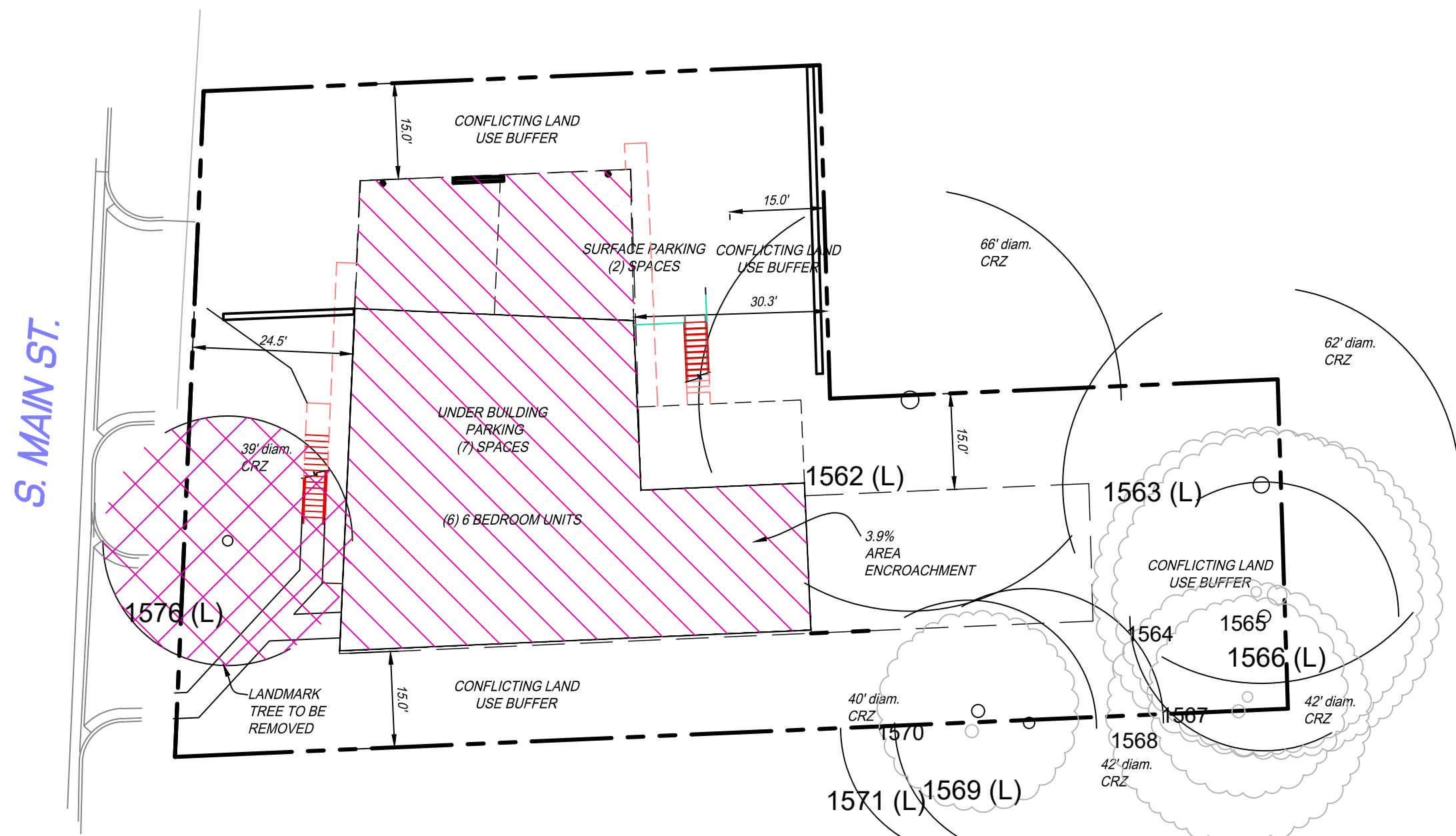
NOTE:
SEE SHEET C4 FOR NATURAL FEATURES ALTERNATIVE
ANALYSIS AND MITIGATION MEASURES NARRATIVE



alternate analysis plan 3

TOTAL EXISTING (LIVE) TREES ON-SITE:	15
EXISTING LANDMARK TREES:	6
EXISTING OTHER TREES (ON-SITE):	9
LANDMARK TREES TO BE REMOVED:	0
LANDMARK TREES TO REMAIN:	6
OTHER TREES TO BE REMOVED (INVASIVE):	4
OTHER TREES TO REMAIN:	5

SCALE: 1"=20.0'



alternate analysis plan 4

TOTAL EXISTING (LIVE) TREES ON-SITE:	15
EXISTING LANDMARK TREES:	6
EXISTING OTHER TREES (ON-SITE):	9
LANDMARK TREE TO BE REMOVED:	1
LANDMARK TREES TO REMAIN:	5
OTHER TREES TO BE REMOVED (INVASIVE):	4
OTHER TREES TO REMAIN:	5

SCALE: 1"=20.0'

THE DESIGN AND CONSTRUCTION OF THIS PROJECT IS BASED ON THE INFORMATION PROVIDED TO THE ENGINEER BY THE CLIENT. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THE INFORMATION PROVIDED. THE ENGINEER'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CONSTRUCTION DEFECTS OR OTHER DAMAGES. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CONSTRUCTION DEFECTS OR OTHER DAMAGES. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CONSTRUCTION DEFECTS OR OTHER DAMAGES.

PROVIDED BY:
Bmk
DESIGN+PLANNING

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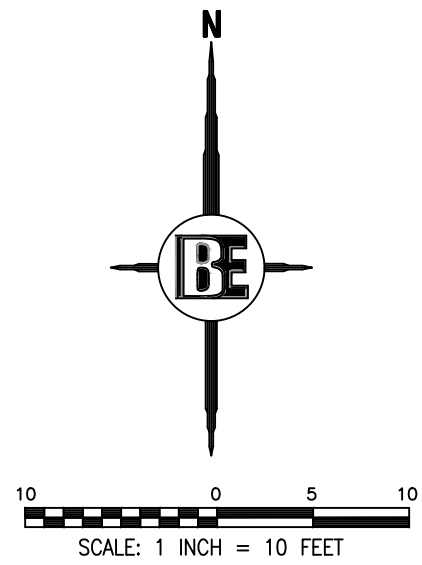
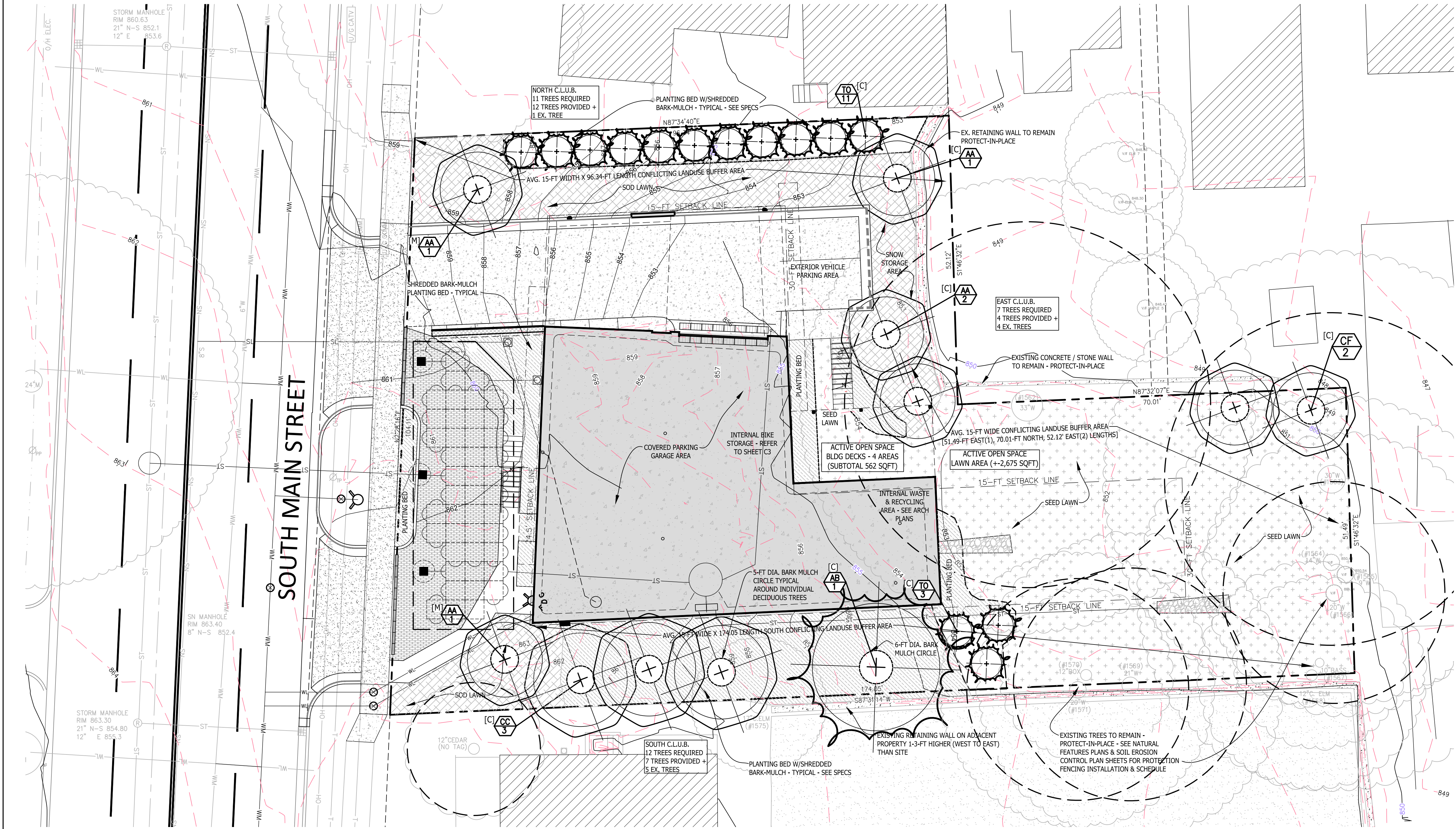
PROJECT: MAIN & DAVIS APARTMENTS
PREPARED FOR: NEST CAPITAL MANAGEMENT LLC
393 WEST BROADWAY 3RD FLOOR
NEW YORK, NEW YORK 10012
917-288-4388
TITLE: PLANNING/NATURAL FEATURES ALTERNATIVES ANALYSIS

NO	BY	REVISION	PER	DATE
5	PC	QTY NR REVIEW COMMENTS	11-5-20	
4	PC	QTY CITY REVIEW COMMENTS	10-19-20	
3	PC	QTY CITY REVIEW COMMENTS	9-11-20	
2	PC	QTY CITY REVIEW COMMENTS	7-20-20	
1	PC	QTY CITY REVIEW COMMENTS	6-5-20	

DESIGNED BY:
DRAWN BY: OTHERS
CHECKED BY:
SCALE: 1" = 20'
JOB NO. 18-434
DATE: 4-10-20

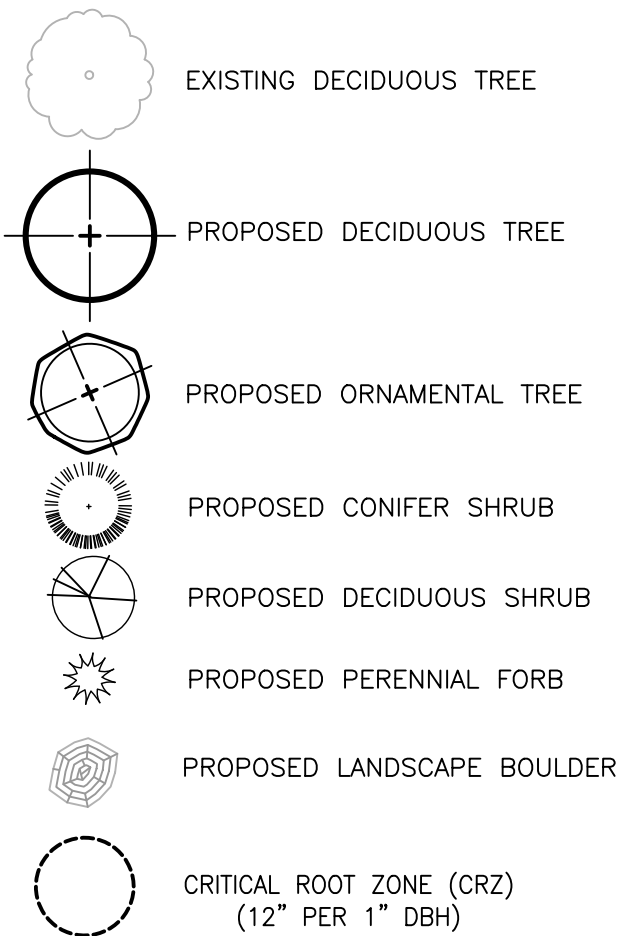
SHEET NO. **C5C**
BEBOSS
Engineering

LANDSCAPE PLAN & PLANT LIST



PROPOSED (PR)	EXISTING (EX)	
300	900	CONTOUR
T/C	XXXXXX	STORM DRAINAGE FLOW
FFE		SPOT ELEVATION
FG		FINISHED FLOOR ELEVATION
T/A		FINISHED GRADE ELEVATION
T/CONC		TOP OF ASPHALT
T/CURB		TOP OF CONCRETE
T/WALK		TOP OF CURB
F/L		TOP OF WALK
T/P		FLOW LINE
B/P		TOP OF PIPE
RIM		BOTTOM OF PIPE
INV		RIM ELEVATION
MH		INVERT ELEVATION
IN		MANHOLE STRUCTURE
CB		INLET STRUCTURE
GV		CATCHBASIN STRUCTURE
HYD		GATEVALVE STRUCTURE
UP		HYDRANT
INSTALL		UTILITY POLE
SN		PROVIDE AND INSTALL
SL		SANITARY SEWER
ST		SANITARY LEAD
WM		STORM SEWER
WL		WATER MAIN
FO		WATER LEAD
OH		FIBER OPTIC
C		CABLE
E		ELECTRIC
G		GAS
T		TELEPHONE
MANHOLE		MANHOLE
INLET / CATCHBASIN		INLET / CATCHBASIN
FLARED END-SECTION		FLARED END-SECTION
GATE VALVE		GATE VALVE
HYDRANT		HYDRANT
UTILITY POLE		UTILITY POLE
FENCE		FENCE
SIGN		SIGN
NOT FIELD VERIFIED		TO BE REMOVED
		SANITARY SEWER LABEL
		STORM SEWER LABEL
		WATER MAIN LABEL
		SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
		SILT FENCE
		DRAINAGE LIMITS
		GRADING LIMITS
		CONCRETE
		ASPHALT
		STANDARD CURB AND GUTTER
		MODIFIED CURB & GUTTER
		TRENCH DRAIN
		ADA GUIDE TILE

LANDSCAPE LEGEND



MUNICIPAL LANDSCAPE REQUIREMENTS

APPLICABLE ORDINANCE SECTIONS ZONE R4C MULTI-FAMILY RESIDENTIAL USE

- 5.20.3 VEHICULAR USE AREA LANDSCAPING AND SCREENING - NOT APPLICABLE
- UNDERGROUND PARKING NOT VISIBLE FROM PUBLIC RIGHT-OF-WAY,
NOT GREATER THAN 3.300 SQ FT
- 5.20.4 CONFLICTING LANDUSE BUFFER (C.L.U.B.)
REQUIRED FOR PORTION OF PARCEL ZONED R4 ADJACENT TO RESIDENTIAL USES
REQUIRED FOR 'VEHICULAR USE AREA' ADJACENT TO RESIDENTIAL USES
PROJECT WILL HAVE RESIDENTIAL USES ON 3 SIDES
PROJECT WILL HAVE A PARTIALLY UNDERGROUND, ENCLOSED VEHICULAR USE AREA
OVER 1,200 SQ FT (2,554 GROSS SQ FT), EACH BUFFER TO BE:
- AVG. 15-FT WIDE (MIN. 8-FT)
- INCLUDE 1 TREE /15-FT, PLANTED 15-30-FT ON CENTER
- MIN. 50% EVERGREEN
- CONT. SCREENING NOT REQ'D PER DEFINITION SECTION 5.37.2 (ENCL. STRUCTURE)
NORTH PROPERTY LINE = 96.34' + 70.01' = 166.35 / 15 = 11.09 = 11 TREES
SOUTH PROPERTY LINE = 174.05' / 15 = 11.60 = 12 TREES
EAST PROPERTY LINE = 52.12' + 51.49' = 103.61 / 15 = 6.91 = 7 TREES
TOTAL OF 30 TREES REQUIRED
- 5.20.5 PRIVATE STREET & SHARED DRIVEWAY BUFFER - NOT APPLICABLE - DIRECT ACCESS TO ST
- 5.20.6 REFUSE/RECYCLING CONTAINER SCREENING - NOT APPLICABLE - INTERNAL BLDG STORAGE
- 5.20.10 STREET TREES
PER CITY DESIGNATION, PROJECT SITE R.O.W. AREA IS A 'DO NOT PLANT AREA' DUE
TO EX. UTILITIES & NARROW R.O.W. - THEREFORE NO STREET TREES OR ESCROW REQUIRED
- 5.23.6 LANDMARK TREES - D. MITIGATION
REPLACEMENT/MITIGATION TREES FOR REMOVAL OF LANDMARK SILVER MAPLE
19.5" * 0.5 = 9.75 CAL. INCHES TO REPLACE
PROVIDED FOR CONFLICTING LAND USE BUFFER (C.L.U.B.) ('C' ON LANDSCAPE PLAN)
8 DECIDUOUS TREES + 14 CONIFEROUS TREES
+ SUPPLEMENTED WITH (9) EXISTING ON-SITE MATURE DECIDUOUS TREES
PROVIDED FOR REPLACEMENT/MITIGATION TREES ('M' ON LANDSCAPE PLAN)
2, 2-1/2" CAL. TREES + REMAINDER PAYMENT TO CITY TREE FUND (4.75 * \$200/IN = \$950)

TREE INVENTORY HEALTH & CONDITION SCHEDULE - WITH REMOVALS

CERTIFIED ARBORIST NO.: MI-4267A DATE: 02-12-2020

TREE TAG ID	GENUS SPECIES	COMMON NAME	DBH	INVASIVE	LANDMARK	TO BE REMOVED	TREE RANK	NOTES
1562	JUGLANS NIGRA	BLACK WALNUT	33"	NO	YES	NO	21	DEEP FEED, PRUNE
1563	JUGLANS NIGRA	BLACK WALNUT	31"	NO	YES	NO	22	DEEP FEED, PRUNE
1564	JUGLANS NIGRA	BLACK WALNUT	14"	NO	NO	YES	8	VERY POOR CONDITION
1565	ACER SACCHARINUM	SILVER MAPLE	9"	NO	NO	YES	16	VERY POOR CONDITION
1566	JUGLANS NIGRA	BLACK WALNUT	21"	NO	YES	NO	19	
1567	TILIA AMERICANA	BASSWOOD	11"	NO	NO	NO	12	
1568	JUGLANS NIGRA	BLACK WALNUT	12"	NO	NO	NO	17	
1569	JUGLANS NIGRA	BLACK WALNUT	21"	NO	YES	NO	16	
1570	ACER NEGUNDO	BOX ELDER	10"	NO	NO	NO	9	
1571	JUGLANS NIGRA	BLACK WALNUT	20"	NO	YES	NO	17	
1572	AILANTHUS ALTISSIMA	TREE-OF-HEAVEN	7"	YES	NO	YES	20	INVASIVE
1573	AILANTHUS ALTISSIMA	TREE-OF-HEAVEN	8"	YES	NO	YES	11	INVASIVE
1574	AILANTHUS ALTISSIMA	TREE-OF-HEAVEN	10"	YES	NO	YES	23	INVASIVE
1575	ULMA PARVIFOLIA	CHINESE ELM	18"	YES	NO	NO	22	ADJACENT PROPERTY
1576	ACER SACCHARINUM	SILVER MAPLE	19.5"	NO	YES	YES	24	
1577	AILANTHUS ALTISSIMA	TREE-OF-HEAVEN	12"	NO	NO	YES	21	INVASIVE
-	ACER SACCHARINUM	SILVER MAPLE	20"	NO	YES	YES	6	DEAD TREE

TREE IMPACT SUMMARY:
8 TREES REMOVED INCLUDING 4 INVASIVE AILANTHUS ALTISSIMA, 1 DEAD, 2 NON-LANDMARK SIZE (IN 'VERY POOR CONDITION' PER ARBORIST REPORT 2-12-20) AND 1 LANDMARK SIZE (19.5") SILVER MAPLE

REMAINING TREES WILL BE PROTECTED WITH FENCING AS SHOWN ON THE NATURAL FEATURES OVERLAY PLAN AND AS DETAILED ON SHEET C6B

TREE PLANT LIST

KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	MATURE SIZE
DECIDUOUS TREES						
AA	5	Amelanchier alnifolia	Downy Serviceberry	2" cal.	B-B	15'Hx20'S
CC	3	Cercis canadensis	Redbud	2" cal.	B-B	20'Hx20'S
CF	2	Cornus florida	Flowering Dogwood	2" cal.	B-B	25'Hx30'S
CONIFER TREES						
AB	1	Abies balsamea	Balsam Fir	7-ft Hgt.	B-B	45'Hx25'S
TO	14	Thuja occidentalis	Arborvitae/Northern White Cedar	7-ft Hgt.	B-B	20'Hx6'S

PLANTING BED NARRATIVE

A SPECIFIC PLANT LIST WILL BE DEVELOPED FOR THE PLANTING BEDS THROUGH THE APPROVAL PROCESS. BEDS WILL CONSIST OF A MIX OF MICHIGAN NATIVE PERENNIALS AND SHRUBS INCLUDING VIBURNUM, POTENTILLA, NINEBARK, BLACK-EYED SUSAN, CONEFLOWER, WILD GINGER, WILD GERANIUM, COREOPSIS, JOE-PYE WEED, BONESET, BEEBALM AND OTHERS.

SUPPLEMENTAL LANDSCAPE NOTES

- REFER TO LANDSCAPE DETAILS AND NOTES SHEET C6B FOR LANDSCAPE SPECIFICATIONS AND DETAILS.
- NO PLANT SUBSTITUTIONS EXCEPT AS APPROVED BY THE CITY OF ANN ARBOR PSA ADMINISTRATOR AND/OR PER SECTION 5.20.9 UNIFIED DEVELOPMENT CODE (UDC) - IN WRITING AND PRIOR TO INSTALLATION.
- MECHANICAL EQUIPMENT TO BE LOCATED EITHER INTERNALLY OR BUILDING-MOUNTED - NO REQUIRED SCREENING - SEE ARCHITECTURAL DRAWINGS.
- DRIVEWAY AND EXTERNAL PARKING AREA TO BE HEATED - MINIMAL SNOW STORAGE REQUIRED - END OF DRIVEWAY DESIGNATED AS NOTED THIS SHEET.

ACTIVE OPEN SPACE

REQUIRED: 1,800 SQ FT = 300 SQ FT * 6 UNITS
PROVIDED: 3,237 SQ FT = 2,675 SQ FT REAR YARD AREA AND 4 BUILDING DECK AREAS
TOTALING 562 SQ FT (REFER TO ARCHITECTURAL PLANS FOR BUILDING SPACE BREAKDOWN)

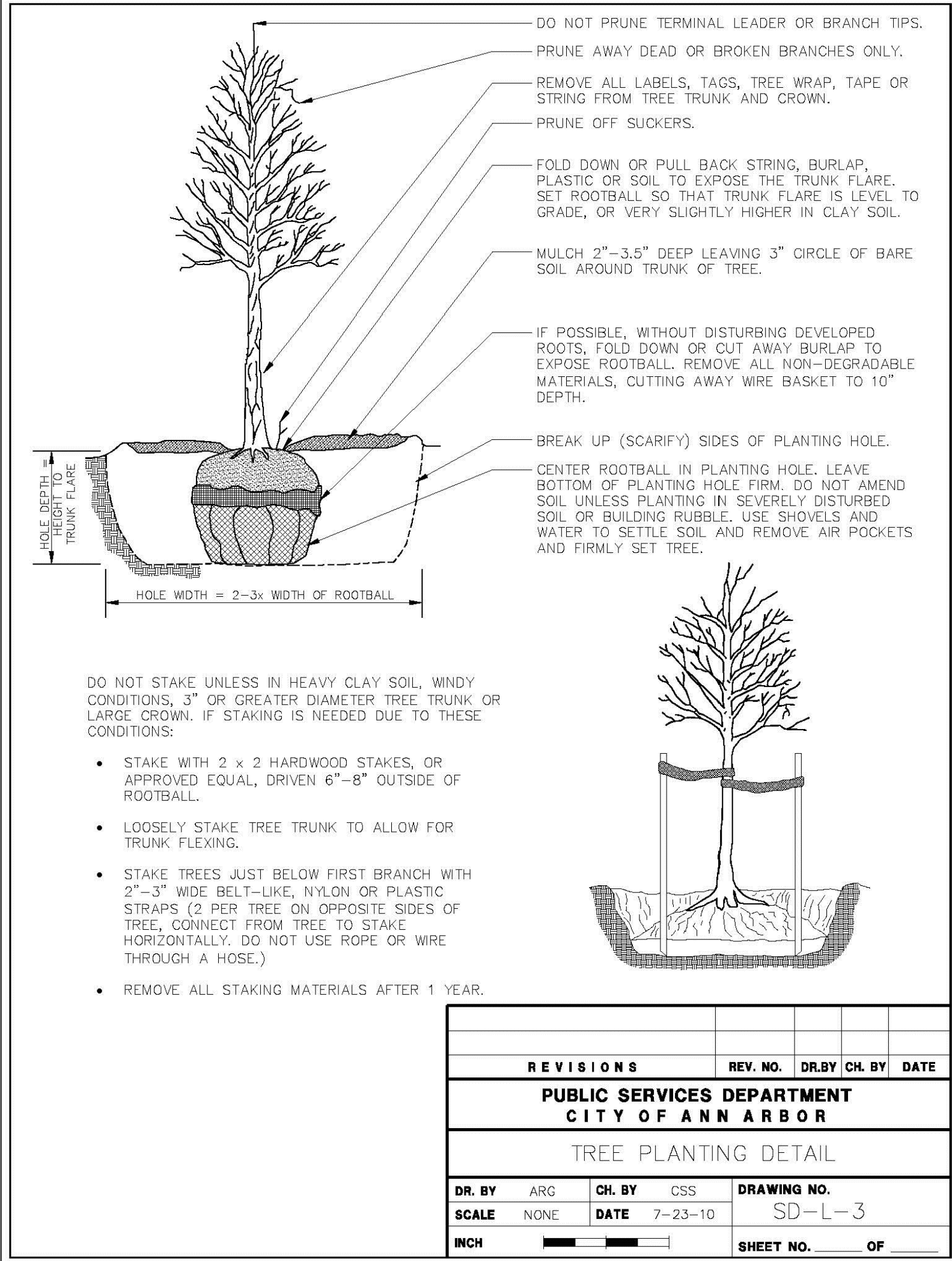
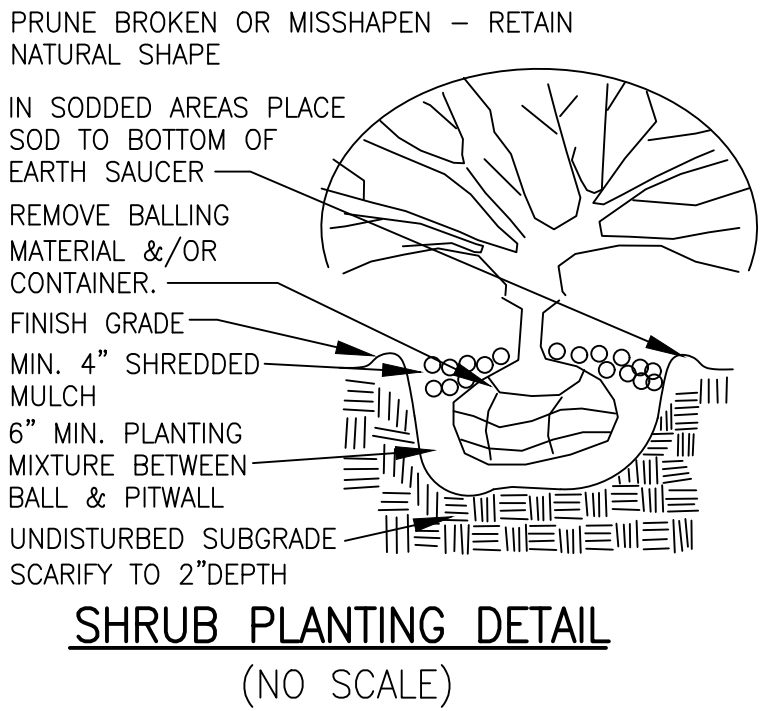
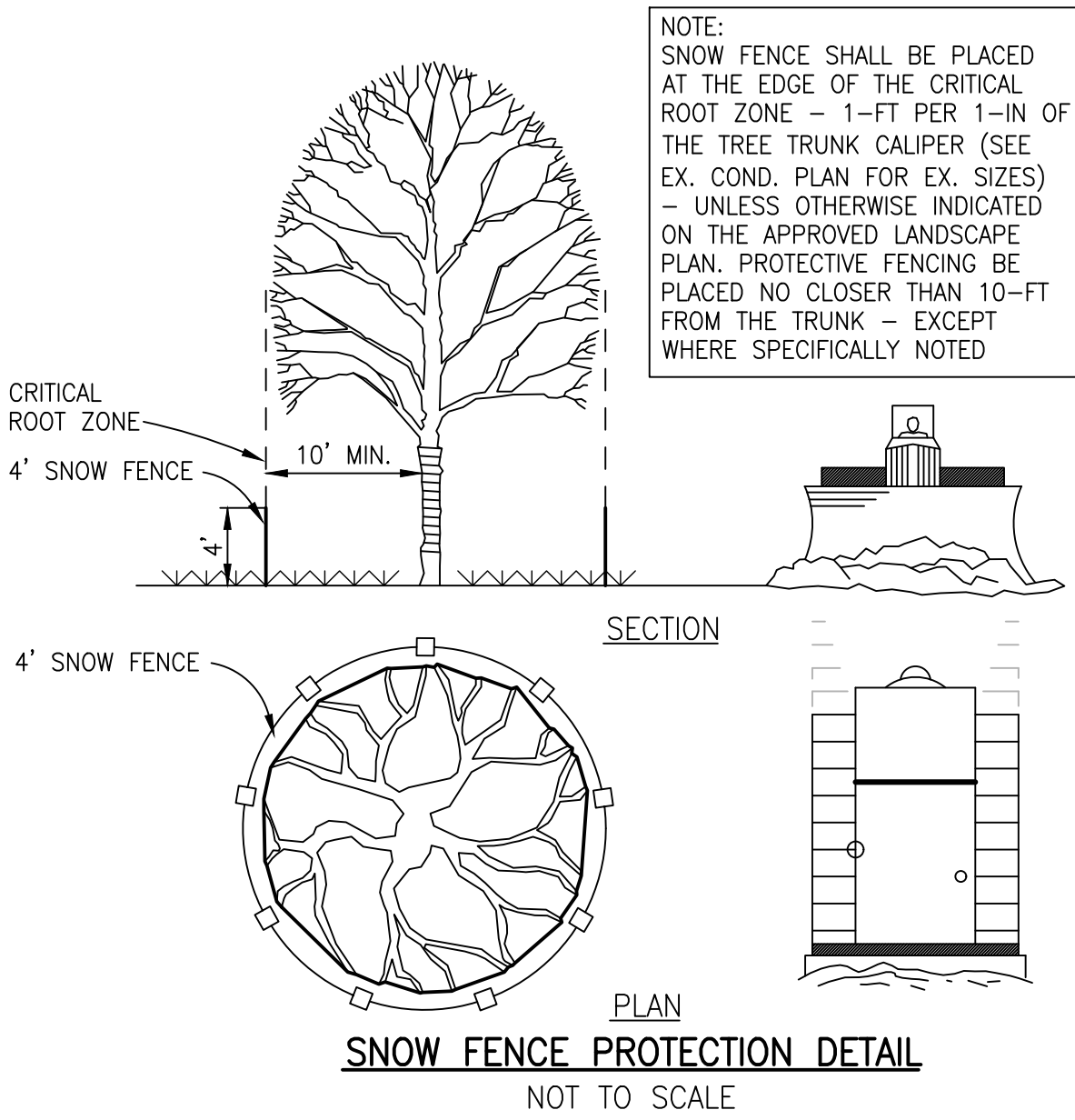
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PROJECT: MAIN & DAVIS APARTMENTS
PREPARED FOR: NEST CAPITAL MANAGEMENT LLC
393 WEST BROADWAY 3RD FLOOR
NEW YORK, NEW YORK 10012
917-288-4388
TITLE: LANDSCAPE PLAN

NO	BY	REVISION	PER	DATE
1	PC			
2	PC			
3	PC			
4	PC			
5	PC			
DESIGNED BY: PC				
DRAWN BY: PC				
CHECKED BY:				
SCALE 1" = 20'				
JOB NO. 18-434				
DATE 4-10-20				
SHEET NO. C6A				



LANDSCAPE DETAILS AND SPECIFICATIONS



GENERAL LANDSCAPE SPECIFICATIONS:

- ALL PLANT MATERIAL SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING MUNICIPALITY. ALL STOCK SHALL BE NURSERY GROWN, CONFORMING TO ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK", AND IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. STOCK SHALL EXHIBIT NORMAL GROWTH HABIT AND BE FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS, OR DISFIGUREMENT. ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AND THE CITY OF ANN ARBOR.
 - ALL PLANT MATERIALS SHALL BE BALLED AND BURLAPPED OR CONTAINER STOCK. NO BARE ROOT STOCK IS PERMITTED. ALL PLANT BALLS SHALL BE FIRM, INTACT, AND SECURELY WRAPPED AND BOUND.
 - ALL PLANT BED MATERIALS SHALL BE EXCAVATED OF ALL BUILDING MATERIALS, OTHER EXTRANEIOUS OBJECTS, AND POOR SOILS TO A MINIMUM DEPTH OF 12-INCHES AND BACKFILLED TO GRADE WITH SPECIFIED PLANTING MIX (SEE BELOW).
 - PLANTING MIXTURE SHALL CONSIST OF 5 PARTS TOPSOIL FROM ON-SITE (AS APPROVED), 4 PARTS COARSE SAND, 1 PART SPHAGNUM PEAT MOSS (OR APPROVED COMPOST), AND 5 LBS OF SUPERPHOSPHATE FERTILIZER PER CU. YD. OF MIX. INGREDIENTS SHALL BE THOROUGHLY BLENDED FOR UNIFORM CONSISTENCY.
 - ALL PLANT BEDS AND INDIVIDUAL PLANTS, NOT OTHERWISE NOTED SHALL BE MULCHED WITH A 4-INCH LAYER OF SHREDDED BARK MULCH. EDGE OF MULCH BEDS AS SHOWN. DECIDUOUS TREES IN LAWN AREAS SHALL RECEIVE A 5-FT DIAMETER CIRCLE OF MULCH AND CONIFER TREES 8-FT (PLANTED CROWN OF TREE) UNLESS OTHERWISE NOTED.
 - LANDSCAPE STONE SHALL BE INSTALLED WHERE NOTED OR INDICATED (HATCHED). STONE SHALL BE 3/4"-1-1/4" WASHED RIVER GRAVEL OR AS SELECTED AND SHALL BE INSTALLED TO A MINIMUM DEPTH OF 3-INCHES.
 - ALL LANDSCAPE BEDS, UNLESS OTHERWISE NOTED SHALL BE INSTALLED OVER WEED BARRIER FABRIC - WATER PERMEABLE FILTRATION FABRIC OF NON-WOVEN POLYPROPYLENE OR POLYESTER FABRIC. FABRIC SHALL BE OF SUITABLE THICKNESS FOR APPLICATION.
 - ALL PLANTS AND PLANT BEDS SHALL BE THOROUGHLY WATERED UPON COMPLETION OF PLANTING AND STAKING OPERATIONS.
 - THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF 1 YEAR FROM THE DATE THE WORK IS ACCEPTED, IN WRITING, BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE, WITHOUT COST TO THE OWNER, WITHIN A SPECIFIED PERIOD OF TIME, ALL DEAD PLANTS, AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION, AS DETERMINED BY THE LANDSCAPE ARCHITECT, DURING AND AT THE END OF THE GUARANTEE PERIOD. REPLACEMENT STOCK SHALL CONFORM TO THE ORIGINAL SPECIFICATIONS.
 - EDGING SHALL BE PROVIDED FOR ALL LANDSCAPE BEDS NOT ADJACENT TO CONCRETE PAVEMENT. EDGING SHALL BE BLACK ALUMINUM EDGING, 3/16-INCH X 4-INCH. INSTALL PER MANUFACTURER'S INSTRUCTIONS, ALL EDGING SHALL BE INSTALLED IN STRAIGHT LINES OR SMOOTH CURVES WITHOUT IRREGULARITIES.
 - SOD SHALL BE DENSE, WELL ROOTED TURF, FREE OF WEEDS. IT SHALL BE COMPRISED OF A BLEND OF AT LEAST TWO KENTUCKY BLUE GRASSES AND ONE FESCUE. IT SHALL HAVE A UNIFORM THICKNESS OF 3/4-INCH AT TIME OF PLANTING, AND CUT IN UNIFORM STRIPS NOT LESS THAN 10-INCHES BY 18-INCHES. SOD SHALL BE KEPT MOIST AND LAID WITHIN 36-HOURS AFTER CUTTING.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ALL SODDED AREAS THAT BROWN-OUT OR HAVE NOT FIRMLY KNITTED TO THE SOIL BASE WITHIN A PERIOD OF 1 MONTH SHALL BE REPLACED BY THE CONTRACTOR, AT NO COST TO THE OWNER.
- SEE MIXTURE SHALL BE AS FOLLOWS:
- | KENTUCKY BLUEGRASS (CHOOSE 3 VARIETIES - ADELPHI, RUGBY, GLADE, OR PARADE) | 30% |
|--|-----|
| RUBY RED OR DAWSON RED FINE FESCUE | 30% |
| ATLANTA RED FESCUE | 20% |
| PENNFINE PERENNIAL RYE | 20% |
- THE ABOVE SEED MIXTURE SHALL BE SOWN AT A RATE OF 250 LBS PER ACRE. PRIOR TO SEEDING, THE TOPSOIL SHALL BE FERTILIZED WITH A COMMERCIAL FERTILIZER WITH A 10-0-10 ANALYSIS:
- | 10% NITROGEN - MIN 25% FROM A UREA FORMALDEHYDE SOURCE | |
|--|--|
| 0 % PHOSPHATE | |
| 10% POTASH - SOURCE POTASSIUM SULFATE OR POTASSIUM NITRATE | |
- PER CITY OF ANN ARBOR ORDINANCE APPLICATIONS OF PHOSPHORUS CONTAINING FERTILIZER BEYOND THE INITIAL SEEDING IS PROHIBITED.
- THE FIRST FERTILIZER APPLICATION SHALL BE AT A RATE OF 10 LBS PER 1000 SQ FT OF BULK FERTILIZER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ANY PART OF THE AREA THAT FAILS TO SHOW A UNIFORM GERMINATION SHALL BE RE-SEEDED AND SUCH RE-SEEDING SHALL CONTINUE UNTIL A DENSE LAWN IS ESTABLISHED. DAMAGE TO SEEDED AREAS RESULTING FROM EROSION SHALL BE REPAIRED BY THE CONTRACTOR.
- ALL AREAS OF THE SITE SCHEDULED FOR SEEDING OR SODDING SHALL FIRST RECEIVE A 6-INCH LAYER OF CLEAN, FRIABLE TOPSOIL. THE SOIL SHALL BE DISCED AND SHALL BE GRADED IN CONFORMANCE WITH THE GRADING PLAN.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES AND TO INFORM THE LANDSCAPE ARCHITECT OF ANY CONFLICTS PRIOR TO COMMENCING LANDSCAPING.
 - ALL LANDSCAPED AREAS WITHIN THE PROJECT AREA SHALL BE PROVIDED WITH AN AUTOMATIC UNDERGROUND SPRINKLER SYSTEM.

ON-GOING LANDSCAPE MAINTENANCE PROGRAM REQUIREMENTS:

- ALL LANDSCAPED AND LAWN AREAS SHALL BE MAINTAINED IN CONFORMANCE WITH THE CITY OF ANN ARBOR LANDSCAPE ORDINANCE CHAPTER 55 UNIFORM DEVELOPMENT CODE (UDC) ARTICLE II, SECTION 5.20, PARTICULARLY SUB-SECTIONS 5.20.11 AND 5.20.12 RELATING TO PUBLIC HAZARDS, WEEDS, AND MOWING.
- ALL PLANT BEDS AND INDIVIDUAL PLANTS, NOT OTHERWISE NOTED SHALL BE TOP-DRESSED AT LEAST SEMI-ANNUALLY WITH A 4-INCH LAYER OF NATURAL (NO COLOR) SHREDDED BARK MULCH. EDGE OF MULCH BEDS SHALL BE EDGE CUT REGULARLY TO MAINTAIN A SHARP EDGE BETWEEN BED AND LAWN. DECIDUOUS TREES IN LAWN AREAS SHALL RECEIVE A 5-FT DIAMETER CIRCLE OF MULCH AND CONIFER TREES 6-FT (PLANTED CROWN OF TREE) UNLESS OTHERWISE NOTED.
- ALL LANDSCAPE BED EDGING, IF INSTALLED, SHALL BE MAINTAINED AND PROMPTLY REPAIRED IF HEAVED OR BROKEN.
- ALL DISEASED, DAMAGED, OR DEAD PREVIOUSLY PLANTED MATERIAL SHALL BE REPLACED IN ACCORDANCE WITH THE CITY OF ANN ARBOR UDC BY THE END OF THE FOLLOWING PLANTING SEASON, AS A CONTINUING OBLIGATION FOR THE DURATION OF THE SITE PLAN.
- TREES SHALL RECEIVE A HAZARD TREE REVIEW ON AN ANNUAL BASIS ALONG WITH REGULAR MAINTENANCE PRUNING. A MINIMUM 10-FT VERTICAL CLEARANCE SHALL BE MAINTAINED FROM TREE BRANCHES TO PUBLIC SIDEWALKS, BIKE AND PEDESTRIAN PATHS. IT IS RECOMMENDED THAT OVERALL TREES SHALL MAINTAIN A SEMBLANCE OF THEIR NATURAL SHAPE.
- IF A TREE IS STAKED AND/OR WRAPPED STRAPPING SHALL BE REGULARLY ADJUSTED AND REMOVED NO LATER THAN 2-YEARS AFTER INITIAL PLANTING.
- SHRUBS AND PERENNIALS SHALL BE REGULARLY MAINTAINED THROUGH MAINTENANCE AND/OR SHAPE PRUNING OR SEASONALLY CUT-BACK. CLEARANCE SHALL BE MAINTAINED AROUND ALL SIDEWALKS, BIKE AND PEDESTRIAN PATHS A MINIMUM OF 1-FT FROM THE EDGE OF THE WALK. IT IS RECOMMENDED THAT SHRUBS MAINTAIN A SEMBLANCE OF THEIR NATURAL SHAPE.
- A DENSE LAWN OF PERMANENT GRASSES, WHERE PLANTED, SHALL BE MAINTAINED THROUGH A REGULAR COMBINATION OF WATERING, MOWING, AND FERTILIZING. BARE AREAS, AREAS SEASONALLY DAMAGED, OR CAUSED BY EROSION SHALL BE REPAIRED AND OVER-SEEDED.
- ALL LANDSCAPE WATER SPRINKLER SYSTEMS, IF INSTALLED, SHALL BE REGULARLY MAINTAINED INCLUDING SEASONAL BLOW-OUT, WINTER PREP, AND SPRING START-UP.

SPECIAL SOIL COMPACTION MITIGATION & TREATMENT PROCESS:

- THE EXISTING SITE SOIL IS GENERALLY DESCRIBED AS HAVING A SILTY SAND SOIL TOP LAYER OVER A CLAYEY SAND UNDERLYING LAYER IN LAWN AREAS AND WITH SIGNIFICANT PORTIONS OF GRAVELED PARKING LOTS. THE EXISTING DRIVES AND PARKING LOT AREAS AND TWO EXISTING HOUSE FOUNDATION AREAS ARE PRESUMED TO ALREADY BE SIGNIFICANTLY COMPACTED.
- THERE ARE ALSO A NUMBER OF MATURE AND/OR LANDMARK-SIZE TREES THROUGHOUT THE SITE THAT WILL NEED TO BE PROTECTED.
- IN CONJUNCTION WITH THE PREPARATION OF THE SOIL EROSION AND SEDIMENT CONTROL MEASURES AND TREE PROTECTION MEASURES SPECIFIED IN OTHER SECTIONS AND AFTER THE BUILDING FOUNDATIONS HAVE BEEN STAKED THE FOLLOWING ADDITIONAL MEASURES SHALL BE TAKEN PRIOR TO CONSTRUCTION:
 - MINIMIZE TOPSOIL STRIPPING AND/OR GRAVEL REMOVAL TO ONLY THOSE AREAS WHERE THE NEW BUILDING FOUNDATIONS ARE TO BE CONSTRUCTED.
 - THE ENTIRE BUILDING FOUNDATION PERIMETER - EXCEPT FOR THE CONSTRUCTION TRACKING PAD - SHALL RECEIVE A MINIMUM 12-FT WIDE BY 8 TO 12-IN THICK LAYER OF SHREDDED LANDSCAPE-TYPE WOOD MULCH (SEE LANDSCAPE SPECIFICATIONS)
 - DUE TO EXISTING CONDITIONS AND TREE SIZES, MULCH MAY BE PLACED WITHIN THE CRITICAL ROOT ZONE WHERE SEVERAL TREE PROTECTION FENCING CONFIGURATIONS ARE INDICATED.
- THE WOOD LANDSCAPE MULCH SHALL BE UTILIZED TO MITIGATE CONSTRUCTION EQUIPMENT TRAVEL COMPACTION AND SHALL BE RE-GRADED AND TOP-DRESS PERIODICALLY THROUGHOUT THE EXTERIOR CONSTRUCTION PERIOD TO MAINTAIN MINIMUM WIDTHS AND CRITICAL THICKNESSES.
- WHEN EXTERIOR BUILDING CONSTRUCTION IS SUBSTANTIALLY COMPLETE THE WOOD LANDSCAPE MULCH SHALL BE REMOVED. WITH PRIOR APPROVAL IT MAY BE STOCKPILED AND RE-USED FOR THE LANDSCAPE BED MULCH.
- FOLLOWING WOOD LANDSCAPE MULCH REMOVAL THE FOLLOWING COMPACTION ALLEVIATING MEASURES SHALL BE TAKEN WHERE LAWN OR LANDSCAPE PLANTING INSTALLATION IS PLANNED:
 - EXISTING GRAVEL SHALL BE REMOVED TO ITS FULL DEPTH (MAX 20-IN.)
 - WATER SOIL AS NECESSARY PRIOR TO OTHER OPERATIONS SO THAT SOIL HAS ADEQUATE MOISTURE BUT IS NOT SATURATED.
 - FOR EXISTING REMOVAL DEPTHS OF 0-20-INCHES SOIL COMPACTION MITIGATION SHALL INCLUDE DEDICATED SUBSOILER/RIPPER (STRAIGHT OR 'L' SHANK ONLY) OR AIR SPADING/AIR TILTING METHOD & BE PERFORMED BY A CONTRACTOR EXPERIENCED IN SUCH METHODS & STRICTLY FOLLOWING MANUFACTURERS RECOMMENDATIONS.
 - ONCE THE SOIL IS SUITABLY TILLED A MIN. 6-IN LAYER OF COMPOSTED TOPSOIL SHALL BE PLACED & RE-TILLED INTO THE NATIVE SOIL.
 - ADDITIONAL TOPSOIL SHALL BE PLACED TO BRING THE SURFACE TO FINAL LINES AND GRADES.
- MITIGATED AREAS THEN MAY RECEIVE PLANTING TOP-DRESSED WITH LANDSCAPE MULCH OR SEEDED OR SODDED.

THE DESIGN AND PREPARATION OF THESE DRAWINGS AND SPECIFICATIONS IS THE RESPONSIBILITY OF THE DESIGNER. THE DESIGNER MAKES NO GUARANTEE OR WARRANTY AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN ON THESE DRAWINGS. THE DESIGNER IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY BE FOUND IN THESE DRAWINGS. THE DESIGNER IS NOT RESPONSIBLE FOR ANY CONFLICTS BETWEEN THE DRAWINGS AND THE CITY OF ANN ARBOR ORDINANCES. THE DESIGNER IS NOT RESPONSIBLE FOR ANY CONFLICTS BETWEEN THE DRAWINGS AND THE CITY OF ANN ARBOR ORDINANCES. THE DESIGNER IS NOT RESPONSIBLE FOR ANY CONFLICTS BETWEEN THE DRAWINGS AND THE CITY OF ANN ARBOR ORDINANCES.

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NEST CAPITAL MANAGEMENT LLC
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917-288-4388

LANDSCAPE PLAN DETAILS & SPECIFICATIONS

PROJECT: **NEST CAPITAL MANAGEMENT LLC**

PREPARED FOR: **NEST CAPITAL MANAGEMENT LLC**

DATE: **7-23-10**

SCALE: **1" = 20'**

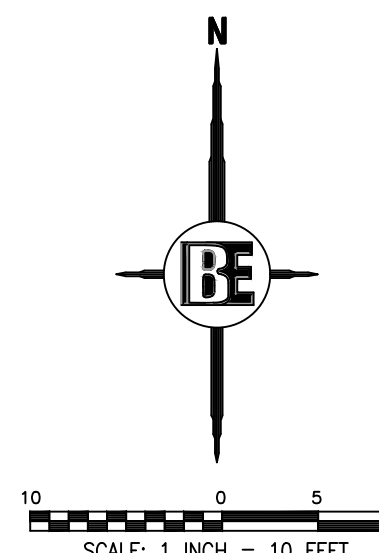
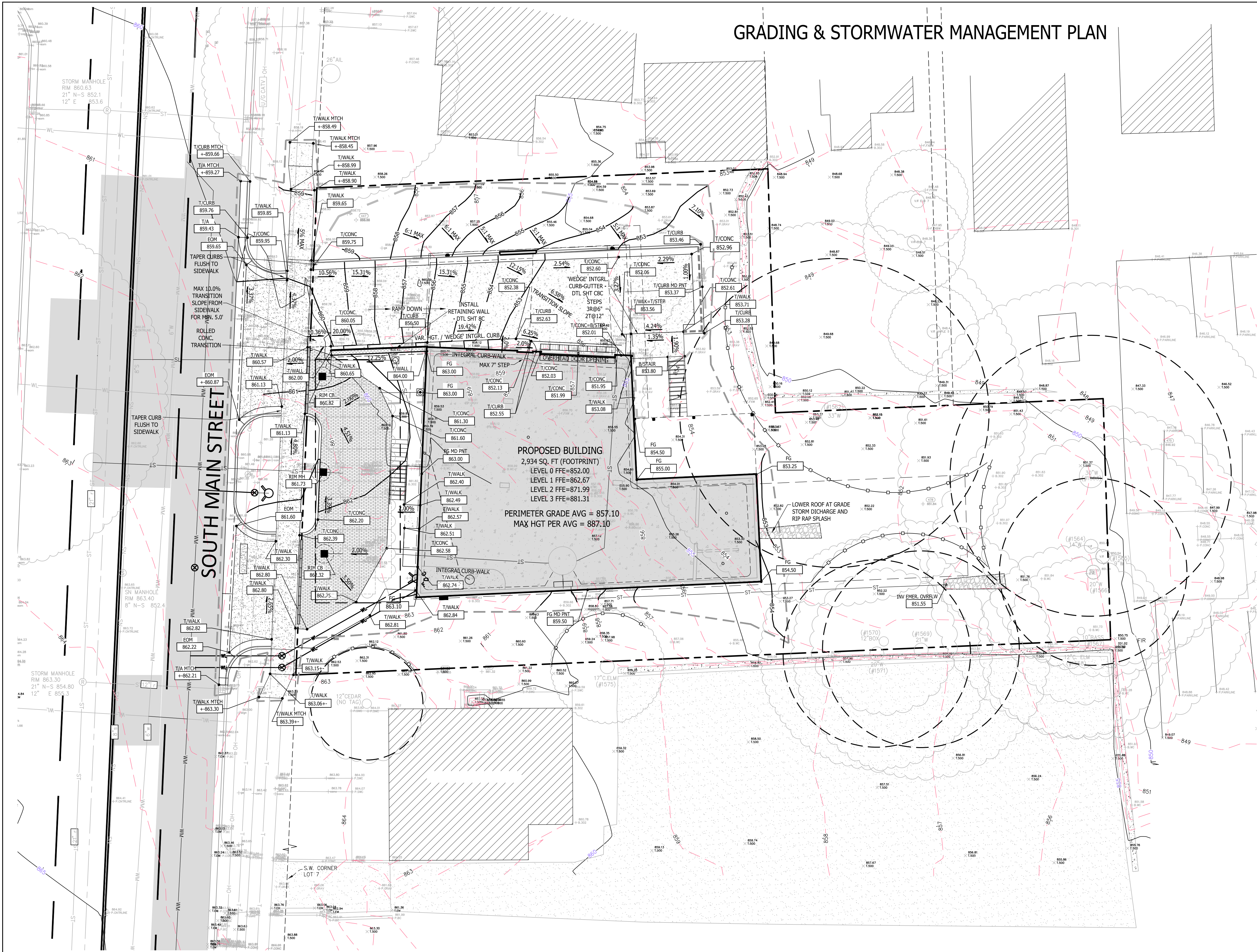
JOB NO. **18-434**

DATE: **4-10-20**

SHEET NO. **C6B**

BEBOSS Engineering

GRADING & STORMWATER MANAGEMENT PLAN



LEGEND

PROPOSED (PR)	EXISTING (EX)
T/C	XXX.XX
FFF	+ 922.08
FG	FG
T/A	T/A
T/CONC	T/CONC
T/CURB	T/CURB
T/WALK	T/WALK
F/L	F/L
T/P	T/P
B/P	B/P
RIM	RIM
INV	INV
MH	MH
IN	IN
CB	CB
GV	GV
HYD	HYD
UP	UP
INSTALL	INSTALL
SL	SL
ST	ST
WM	WM
WL	WL
FO	FO
OH	OH
C	C
E	E
G	G
T	T
INLET / CATCHBASIN	INLET / CATCHBASIN
FLARED END-SECTION	FLARED END-SECTION
GATE VALVE	GATE VALVE
HYDRANT	HYDRANT
UTILITY POLE	UTILITY POLE
FENCE	FENCE
SIGN	SIGN
NOT FIELD VERIFIED TO BE REMOVED	NOT FIELD VERIFIED TO BE REMOVED
SANITARY SEWER LABEL	SANITARY SEWER LABEL
STORM SEWER LABEL	STORM SEWER LABEL
WATER MAIN LABEL	WATER MAIN LABEL
SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)	SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
SILT FENCE	SILT FENCE
DRAINAGE LIMITS	DRAINAGE LIMITS
GRADING LIMITS	GRADING LIMITS
CONCRETE	CONCRETE
ASPHALT	ASPHALT
STANDARD CURB AND GUTTER	STANDARD CURB AND GUTTER
MODIFIED CURB & GUTTER	MODIFIED CURB & GUTTER
TRENCH DRAIN	TRENCH DRAIN
ADA GUIDE TILE	ADA GUIDE TILE

IMPERVIOUS AREA CALCULATIONS

5,694 SQFT > 5,000 SQFT THRESHOLD FOR STORMWATER CONTROL/STORAGE REQUIREMENT.

REFER TO DIMENSIONAL SITE PLAN SHEET C3A FOR BREAKDOWN OF IMPERVIOUS AREAS.

STORMWATER CONTROL TO BE THROUGH A COMBINATION OF A CISTERN AND UNDERGROUND DETENTION SYSTEM WITH CONTROLLED RELEASE THROUGH AN OCS TO THE CITY STORMSEWER SYSTEM. REFER TO UTILITY SHEET C7 AND STORM DETAIL SHEETS C8D, C8E & C8F FOR ADDITIONAL INFORMATION

NRCS EXISTING SOILS DATA:

For FOX SANDY LOAM, TILL PLAIN 2-6% SLOPES

REFER TO THE GEOTECHNICAL INVESTIGATION REPORT BY HARTLEY GEOTECHNICAL GROUP, LLC DATED 8-15-19 FOR ADDITIONAL SOILS INFORMATION

ALSO REFER TO THE INFILTRATION EVALUATION BY G2 CONSULTING GROUP DATED 11-8-19 FOR ADDITIONAL SOIL PERMEABILITY INFORMATION

CONTROL POINT SUMMARY:

#1: NEAR NW CORNER OF PROPERTY AS SHOWN: 60P NAIL 281235.773 N 13290271.681 E ELEV. = 858.58 (NAVD88 DATUM)

#2: NEAR SW CORNER OF PROPERTY AS SHOWN: 60P SPIKE 281134.810 N 13290249.655 E ELEV. = 863.00 (NAVD88 DATUM)

REFERENCE CONTROL POINTS

AAGRS PID	EASTING (X)	NORTHING (Y)	ELEV (Z)	DESCRIPTION
001Sa	13290007.795	2810988.841	859.12	XX of Ashley and W. Hudson St.
001Sb	13290018.499	2810988.841	859.12	Point of Ashley and W. Hudson St.
001S	13290018.499	2810988.841	859.12	Point of Ashley and W. Hudson St.
001S	13290018.499	2810988.841	859.12	Point of Ashley and W. Hudson St.

What coordinate system was this Project derived from: a Local Coordinate System or the State Plane Coordinate System? ☐ Local Coordinate System ☒ State Plane Coordinate System

FOR ADDITIONAL REFERENCE INFORMATION SEE FULL AAGRS COORDINATE TRANSFORMATION SHEET DATED 11-28-18 BY ARBOR LAND CONSULTANTS, INC.

ORIGINAL SURVEY BY:

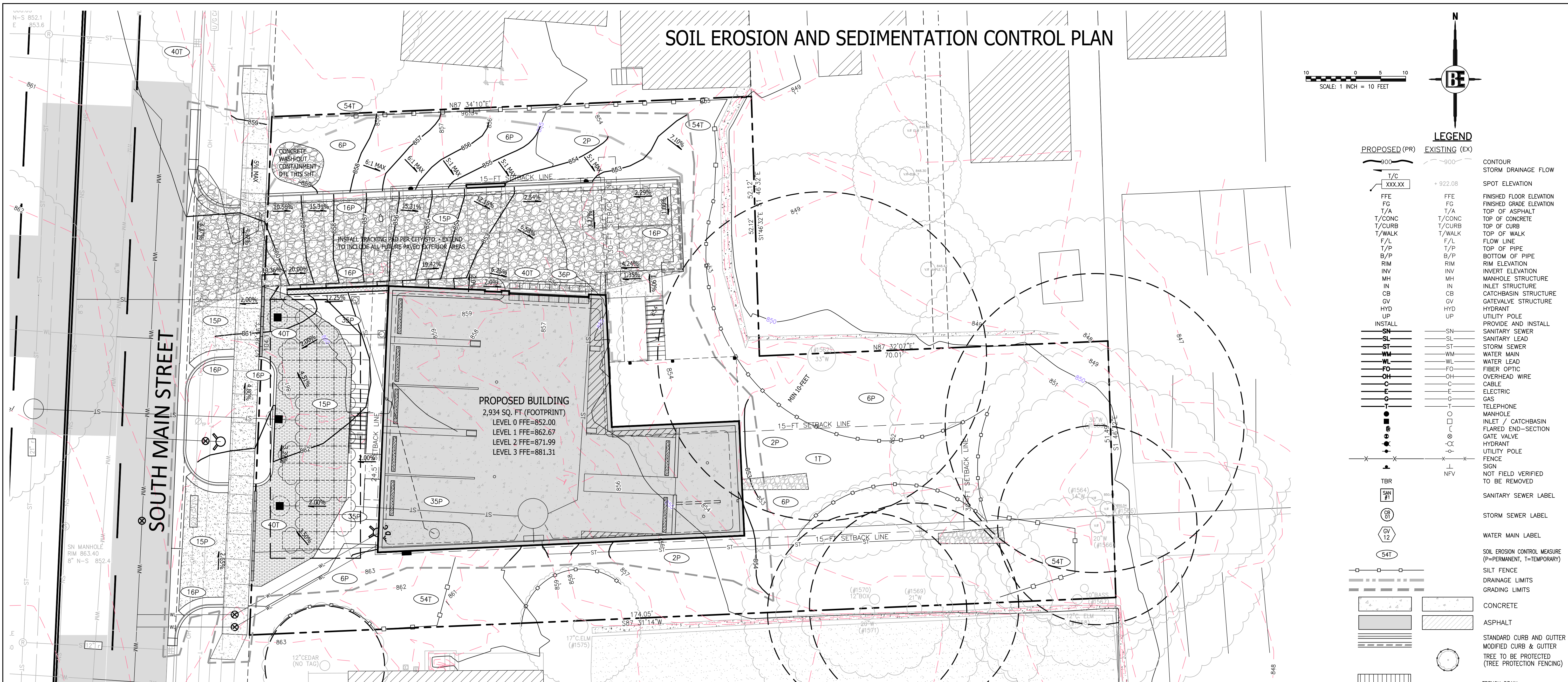
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PROJECT: MAIN & DAVIS APARTMENTS
PREPARED FOR: NEST CAPITAL MANAGEMENT LLC
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DESIGNED BY:	PC
DRAWN BY:	PC
CHECKED BY:	
SCALE	1" = 10'
JOB NO.	18-434
DATE	4-10-20
SHEET NO.	C8A

SOIL EROSION AND SEDIMENTATION CONTROL PLAN



CONTROLS & MEASURES NARRATIVE

ACTIVITY	DESCRIPTION
MAINTAIN LANDSCAPING, REPLACE MULCH	COLLECT GRASS, TREE, AND SHRUB CLIPPINGS. DISPOSE IN APPROVED CONTAINER. REPLACE DEAD SOO, TREES AND SHRUBS.
CLEAN INLETS	REMOVE LITTER, SEDIMENT, AND DEBRIS. DISPOSE OF IN APPROVED LANDFILL.
COLLECT LITTER	DISPOSE OF WITH INLET DEBRIS.
SWEEP PARKING LOT	REMOVE MUD, DIRT, GREASE AND OIL WITH PERIODIC SWEEPING
DUST CONTROL	SPRINKLE WATER AS NEEDED

SOIL EROSION & SEDIMENT CONTROL NARRATIVE:

THE EXISTING SITE INCLUDES 2 EXISTING HOUSES WITH GRAVEL PARKING AREAS ENCOMPASSING MOST OF THE REAR YARDS. THE SITE STEEPLY SLOPES FROM WEST TO EAST AWAY FROM SOUTH MAIN STREET AND TOWARD BROWN AND DAVIS STREETS. THE HOMES WILL BE RAZED AND A NEW APARTMENT BUILDING CONSTRUCTED. OVERALL IMPERVIOUS SURFACES WILL BE REDUCED. MUCH OF THE EXISTING VEGETATION WILL BE RETAINED OR SUPPLEMENTED AND A PORTION OF STORMWATER RUNOFF WILL BE DETAINED IN AN UNDERGROUND TANK. APPROXIMATELY 70% OF THE EXISTING SITE WILL BE DISTURBED. PROPOSED SOIL EROSION AND SEDIMENT CONTROLS ARE INTENDED TO ACCOMMODATE EXISTING SITE CONDITIONS AND THE PROPOSED WORK. REFER TO SHEET C6B FOR SPECIAL TREE PROTECTION MEASURES AND SPECIAL SOIL COMPACTION PREVENT AND MITIGATION MEASURES DURING CONSTRUCTION.

CONTROLS & MEASURES POST CONSTRUCTION SEQUENCE

ACTIVITY	WEEKLY	MONTHLY	AS REQUIRED
MAINTAIN LANDSCAPING, REPLACE MULCH	X	X	X
CLEAN INLETS		X	X
COLLECT LITTER	X		X
SWEEP PARKING LOT		X	X

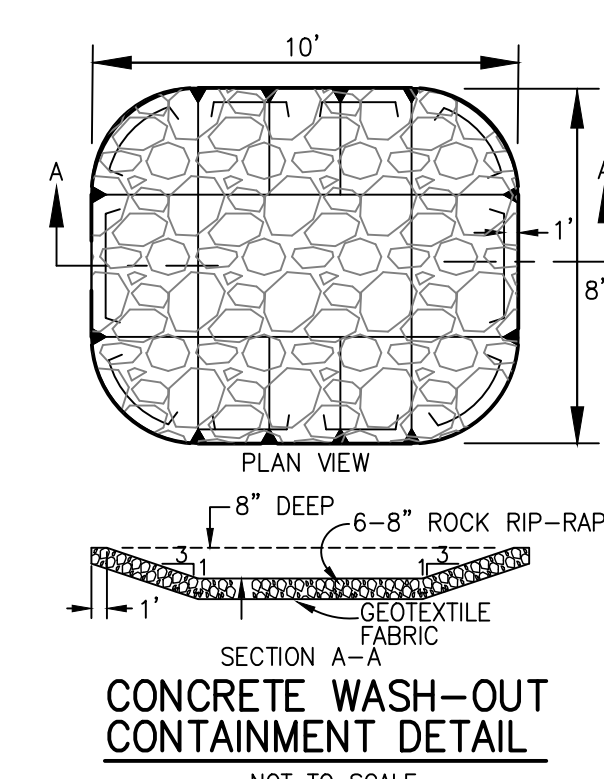
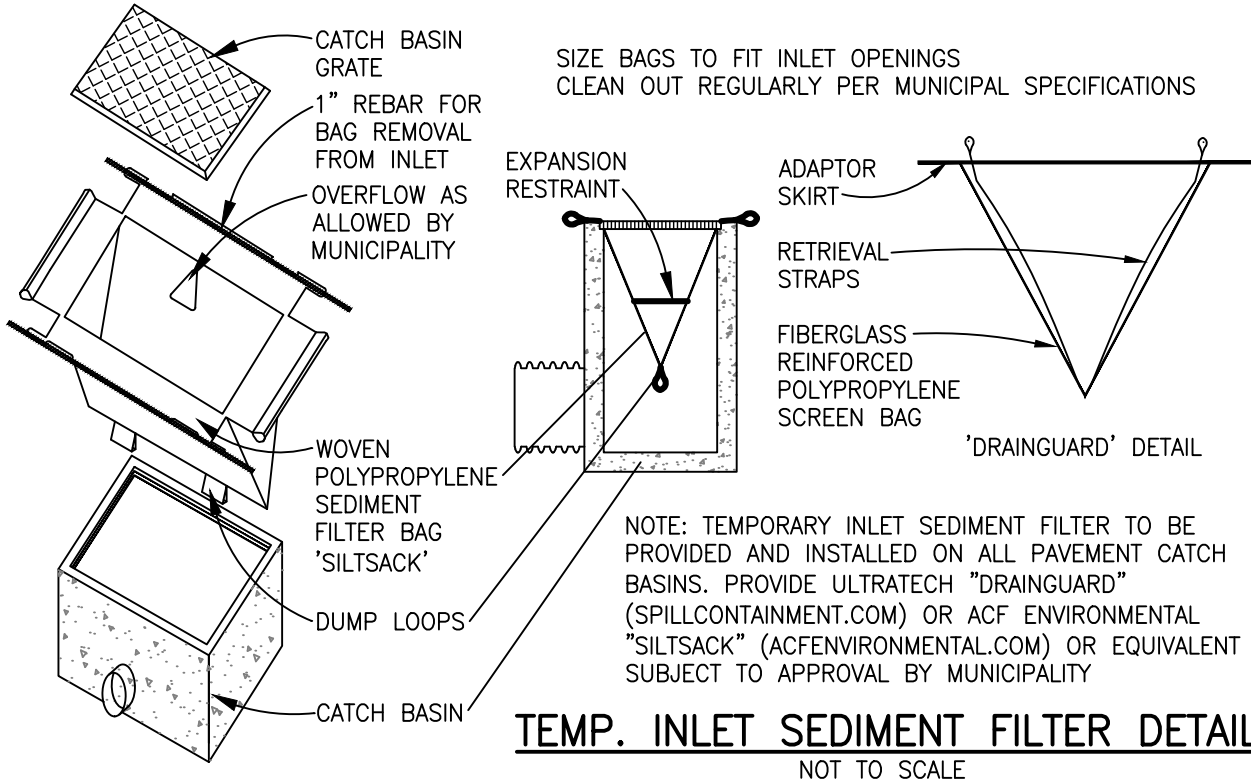
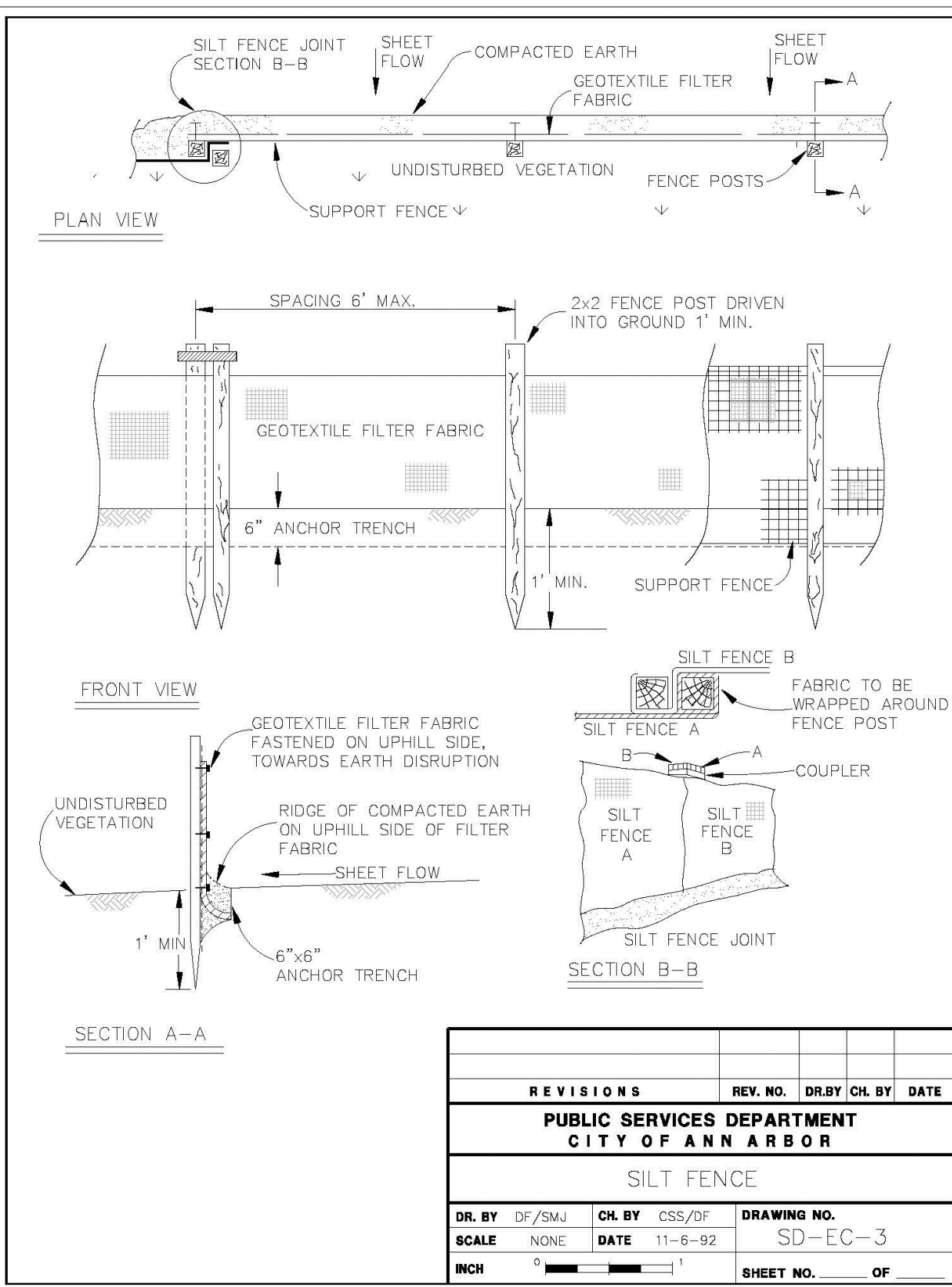
SOIL EROSION CONTROL NOTES:

- A SOIL EROSION AND SEDIMENTATION (SESC) CONTROL PERMIT SHALL BE OBTAINED FROM THE CITY OF ANN ARBOR PRIOR TO CONSTRUCTION. ALL SESC MEASURES SHALL BE IN ACCORDANCE WITH CITY CODE CHAPTER 63 DIVISION VII - SOIL EROSION AND SEDIMENTATION CONTROL.
- APPROPRIATE SESC MEASURES SHALL BE ESTABLISHED PRIOR TO CONSTRUCTION AND CONTINUOUSLY MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.
- WHEREVER FEASIBLE DURING CONSTRUCTION, NATURAL VEGETATION SHOULD BE RETAINED AND PROTECTED.
- WHERE LAND NEEDS TO BE DISTURBED, LIMIT THE EXPOSED AREA TO THE SMALLEST PRACTICAL SIZE AT ANY ONE TIME.
- INLET PROTECTION SHALL BE INSTALLED ON ALL NEW CATCH BASIN INLETS AND TRENCH DRAINS AS THEY ARE CONSTRUCTED.
- PERMANENT SESC MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR EARTH CHANGE HAS BEEN COMPLETED.
- REFER TO LANDSCAPE DETAIL SHEET C6B FOR TREE PROTECTION DETAIL.
- REFER TO NATURAL FEATURES OVERLAY WITH SELECTIVE DEMOLITIONS. SHEET C5 FOR ADDITIONAL INFORMATION AND TIMING OF THE INSTALLATION OF TREE PROTECTION FENCING AND SPECIAL SOIL COMPACTION MEASURES.

CONSTRUCTION SEQUENCE

- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES IS MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.
- SEPT. 20 1. INSTALL SILT FENCE & STORM SYS. PROTECTION.
SEPT. 20 2. SITE DEMOLITION
OCT. 20 3. ROUGH GRADE & UTILITIES
OCT. 20-APR. 21 4. BUILDING CONSTRUCTION
NOV. 20-DEC. 20 5. STORMWATER SYSTEM INSTALLATION
APR. 21 6. RETAINING WALL INSTALLATION
APR-JUNE 21 7. INSTALL PAVEMENT AND WALKS
JUNE 21 8. FINE GRADE, SPREAD TOPSOIL AND SEED.
JULY 21 9. REMOVE ALL EROSION CONTROL STRUCTURES.
JULY 21 10. REMOVE ACCUM. SILT FROM ALL EX. DRAINAGE.

COST OPINION TO STABILIZE SITE IF CONST. WERE TO CEASE (2020 DOLLARS):
- SIZE OF MAXIMUM DISTURBED AREA = 10,110 SQ FT
- TOPSOIL (4" THICK @ \$25 / CU YD
- GRASS SEED W/ SHREDDED STRAW MULCH @ \$2.75 / SQ YD
= (10,110 * 0.33 / 27 * 25) + (10,100 / 9 * 2.75) = \$6,210



NRCS EXISTING SOILS DATA:
F0B FOX SANDY LOAM, TILL PLAIN 2-6% SLOPES

SOIL REPORTS INDICATE SITE SOIL CONSISTING OF A SILTY SAND TOP LAYER & CLAYEY SAND UNDERLYING LAYER

REFER TO THE GEOTECHNICAL INVESTIGATION REPORT BY HARTLEY GEOTECHNICAL GROUP, LLC DATED 8-15-19 FOR ADDITIONAL SOILS INFORMATION
ALSO REFER TO THE INFILTRATION EVALUATION BY G2 CONSULTING GROUP DATED 11-8-19 FOR ADDITIONAL SOIL PERMEABILITY INFORMATION

SOIL EROSION CONTROL MEASURES

P=PERMANENT T=TEMPORARY

TOTAL DISTURBED AREA = APPROX. 0.24 AC (10,527 SQ FT)

1	STRIPPING & STOCKPILING TOPSOIL	TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION STOCKPILE SHOULD BE TEMPORARILY SEED
2	SELECTIVE GRADING & GRAPING	WATER CAN BE DIVERTED TO MINIMIZE EROSION FLATTER SLOPES EASE EROSION PROBLEMS
6	SEEDING WITH MULCH AND/OR MATING	FACILITATES ESTABLISHMENT OF VEGETATIVE COVER EFFECTIVE FOR DRAINAGEWAYS WITH LOW VELOCITY EASILY PLACED IN SMALL QUANTITIES BY INEXPERIENCED PERSONNEL SHOULD INCLUDE PREPARED TOPSOIL BED
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VELOCITY IRREGULAR SURFACE WILL HELP SLOW VELOCITY
16	CURB & GUTTER	KEEPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACE COLLECTS AND CONDUCTS RUNOFF TO ENCLOSED DRAINAGE SYSTEM OR PREPARED DRAINAGEWAY
35	STORM SEWER	SYSTEM REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF CONDUCTS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION USE CATCH BASINS TO COLLECT SEDIMENT
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF MAY USE FILTER CLOTH OVER INLET
40	INLET SEDIMENT FILTER	EASY TO SHAPE COLLECTS SEDIMENT MAY BE CLEANED AND EXPANDED AS NEEDED
54	SILT FENCE	USES GEOTEXTILE FABRIC AND POST OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY. (SEE DETAIL THIS SHEET)

MAIN & DAVIS APARTMENTS

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NEW YORK, NEW YORK 10012
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PROJECT:

DESIGNED BY: PC
DRAWN BY: PC
CHECKED BY: PC
SCALE: 1" = 20'
JOB NO. 18-434
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SHEET NO. C8B

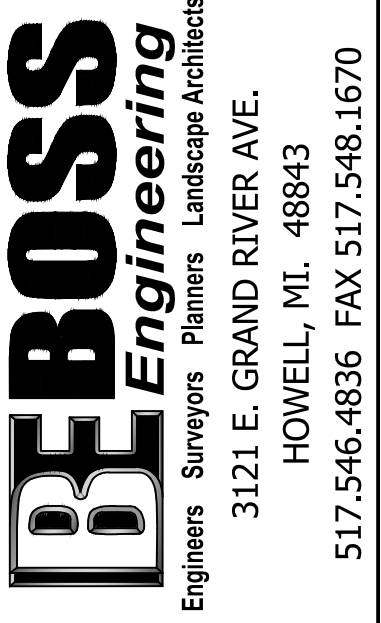
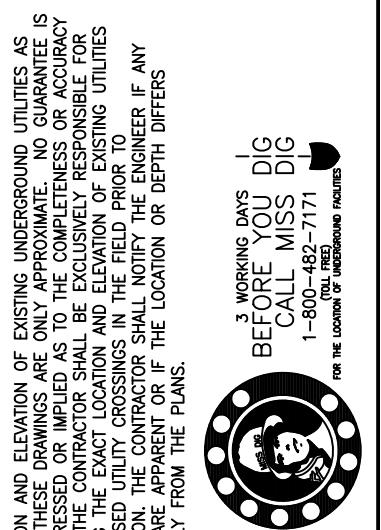
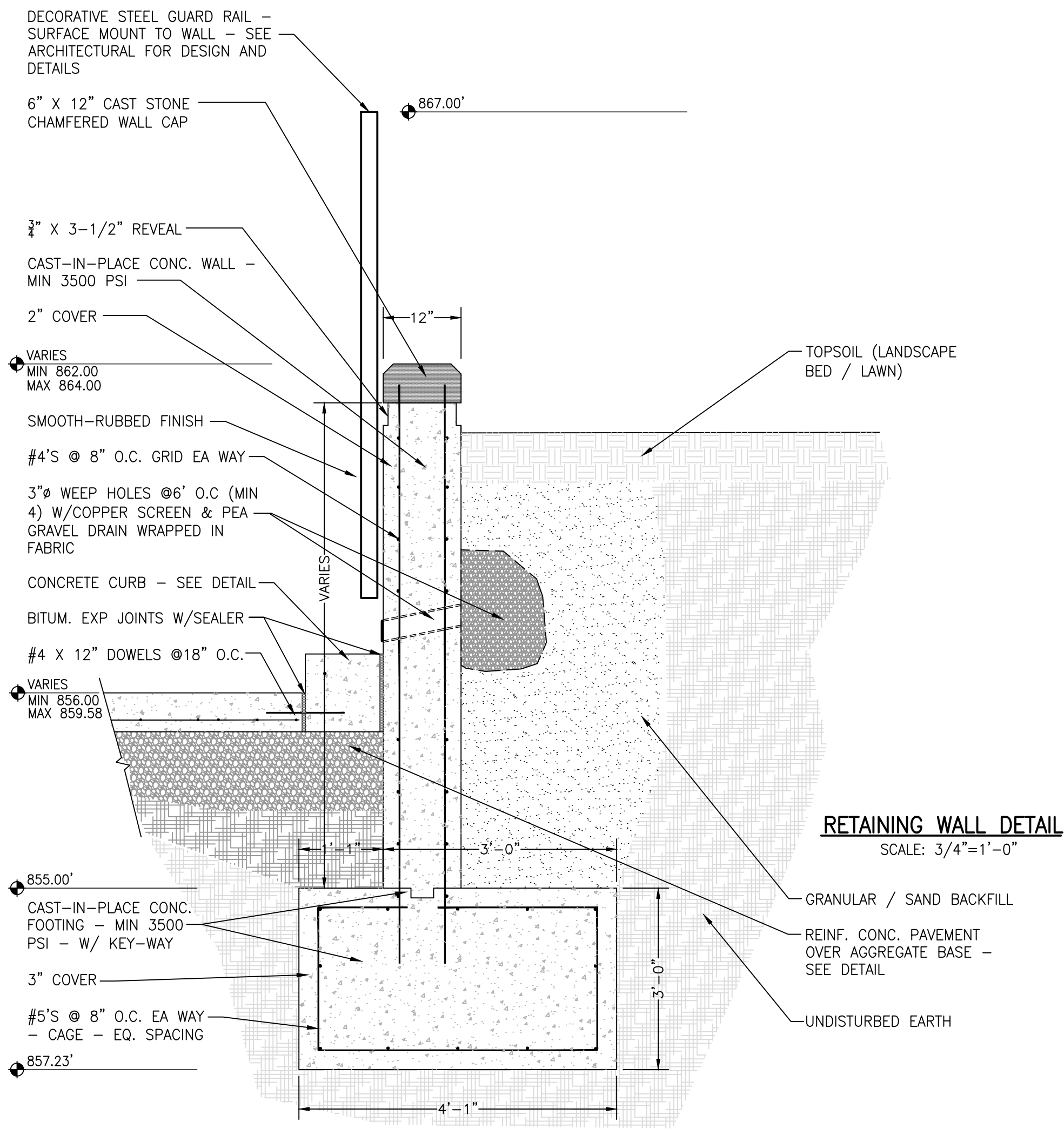
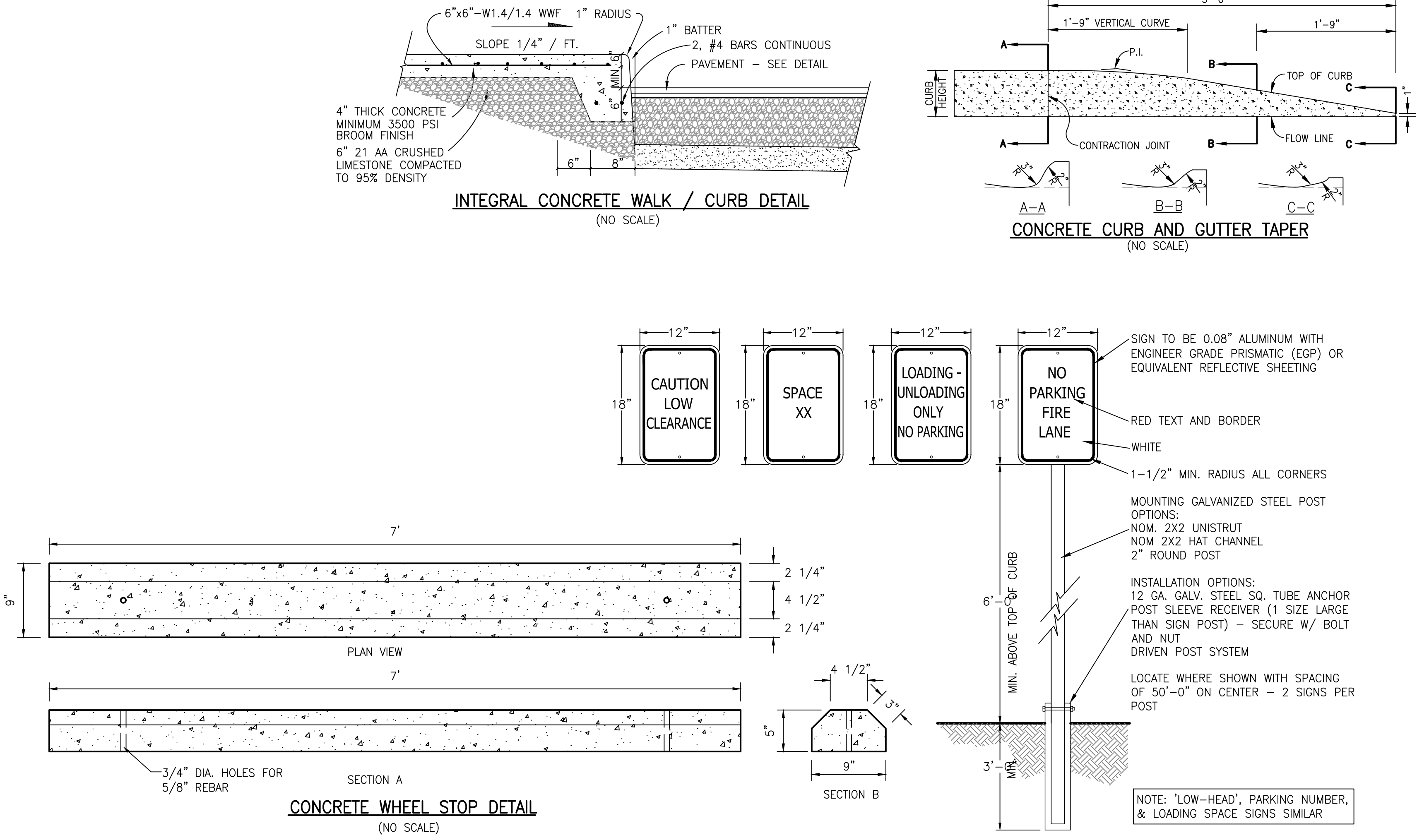
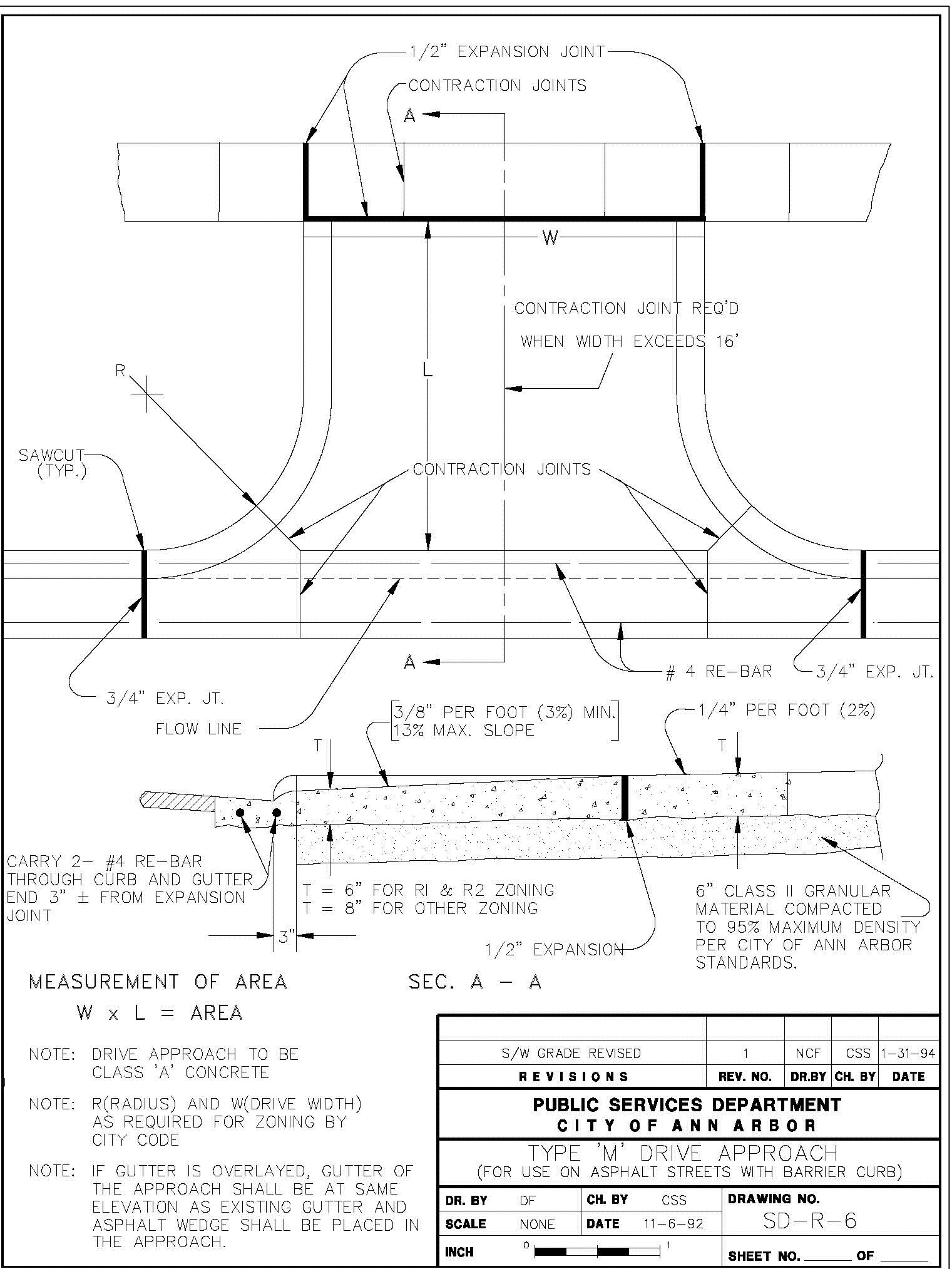
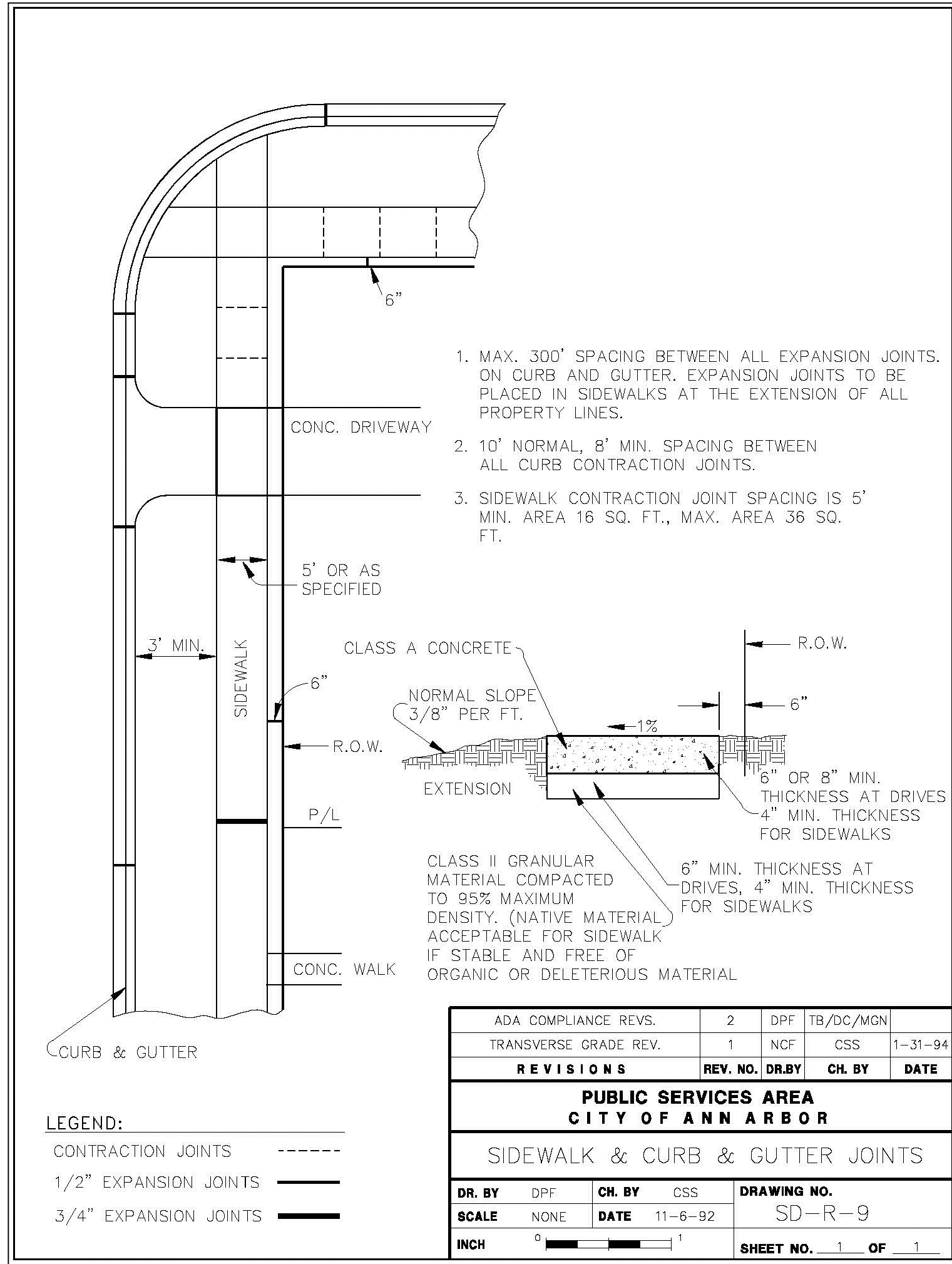
TITLE:

SOIL EROSION & SEDIMENTATION CONTROL PLAN

BEBOSS Engineering
Engineers Surveyors Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
517-546-4836 FAX 517-548-1670

Arbor Land Consultants, Inc.
Professional Land Surveyors
2936 S. Maryland
Ann Arbor, MI 48103
734-767-7711
www.arborlandinc.com

THE DESIGN AND ELEVATION OF WORKING DRAWINGS SHALL BE SHOWN ON THESE DRAWINGS AND ONLY APPROVED. NO GUARANTEE IS MADE FOR THE ACCURACY OF THE INFORMATION PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE THE LOCATION OF EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE THE LOCATION OF EXISTING UTILITIES.



PROJECT: MAIN & DAVIS APARTMENTS		FOR: NEST CAPITAL MANAGEMENT LLC 383 WEST BROADWAY 3RD FLOOR NEW YORK, NEW YORK 10012 917-288-4388		TITLE: EROSION CONTROL & MISC. CONST. DETAILS	
1	PC	QTY NR REVIEW COMMENTS	11-5-20	NO BY	DATE
2	PC	CITY REVIEW COMMENTS	10-15-20		
3	PC	CITY REVIEW COMMENTS	9-11-20		
4	PC	CITY REVIEW COMMENTS	7-20-20		
5	PC	CITY REVIEW COMMENTS	6-5-20		
DESIGNED BY: PC		DRAWN BY: PC		CHECKED BY:	
SCALE AS NOTED		JOB NO. 18-434		DATE 4-10-20	
SHEET NO. C8C		BEBOSS Engineering			

Section IV: Computational Requirements For Stormwater Management Systems

Part B: PROPOSED CONDITIONS

STANDARD METHOD RUNOFF VOLUME WORK SHEETS

W1

Determining Post-Development Cover Types, Areas, Curve Numbers, and Runoff Coefficients

Ratio Method Variables

Storm Type	Soil Type	Area (ft²)	Area (ac)	Runoff Coefficient (c)	CN (Area)
GRASS	D	1,654	0.038	0.25	0.013
ROOF/PAVEMENT		5,060	0.116	0.95	0.11

Total: $\sum C(Area) = 0.123$
Area Total: $\sum ac \text{ or } \sum ft^2 = 6,714$
Weighted C: $\sum C(Area) / \sum ac \text{ or } \sum ft^2 = 0.789$

NRCS Variables

Previous Cover Type	Soil Type	Area (ft²)	Area (ac)	Curve Number	CN (Area)
GRASS	D	1,654	0.038	80	3.04

Total: $\sum C(Area) = 0.04$
Area Total: $\sum ac \text{ or } \sum ft^2 = 0.038$
Weighted CN: $\sum C(Area) / \sum ac \text{ or } \sum ft^2 = 80$

NRCS Variables

Impervious Cover Type	Soil Type	Area (ft²)	Area (ac)	Curve Number	CN (Area)
ROOF/PAVEMENT		5,060	0.116	98	11.37

Total: $\sum C(Area) = 11.37$
Area Total: $\sum ac \text{ or } \sum ft^2 = 5.116$
Weighted CN: $\sum C(Area) / \sum ac \text{ or } \sum ft^2 = 98$

* Use this area for the remainder of the runoff calculations
* Required for first flush runoff calculations
* Required for bankfull and 100-year runoff calculations

Section IV: Computational Requirements For Stormwater Management Systems

W2

Standard Method Runoff Volume Calculations

First Flush Runoff Calculations (V_{ff})

A.

$V_{ff} = (1") \left(\frac{1"}{12"} \right) \left(\frac{43560 ft^2}{1 ac} \right) AC$
 $V_{ff} = (1") \left(\frac{1"}{12"} \right) \left(\frac{43560 ft^2}{1 ac} \right) (0.154) (0.789)$
 $V_{ff} = 448.872 ft^3$

A = Total Site Area (ac) excluding "Self-Crediting" BMPs from Worksheet 1
C = Weighted Runoff Coefficient from Worksheet 1

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Section IV: Computational Requirements For Stormwater Management Systems

W3

Standard Method Runoff Volume Calculations

Pre-development Bankfull Runoff Calculations ($V_{p,pre}$)

A.

2 year/24 hour storm event
 $P = 2.35in$

B.

The pre-development land cover will be combination of existing roofs, gravel, & poor condition grass (<50%) (D). Determine the associated soil hydrologic group for the entire site and choose the curve number.
 $CN = 94$

C.

$S = \frac{1000}{CN} - 10$
 $S = \frac{1000}{94} - 10$
 $S = 0.64 in$

D.

$Q = \frac{(P - 0.2)^2}{(P + 0.85)}$
 $Q = \frac{(2.35 - 0.2)^2}{(2.35 + 0.85)}$
 $Q = 1.726 in$

E.

Total Site Area (a1) excluding "Self-Crediting" BMPs
Area = 6,714 s/f

F.

$V_{ff,pre} = Q(V_{12})Area$
 $V_{ff,pre} = (1") (V_{12})(6,714)$
 $V_{ff,pre} = 965.958 ft^3$

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Section IV: Computational Requirements For Stormwater Management Systems

W4

Standard Method Runoff Volume Calculations

Previous Cover Post-Development Bankfull Runoff Calculations ($V_{p,post}$)

A.

2 year/24 hour storm event
 $P = 2.35in$

B.

Previous Cover CN From Worksheet 1
 $CN = 80$

C.

$S = \frac{1000}{CN} - 10$
 $S = \frac{1000}{80} - 10$
 $S = 2.50 in$

D.

$Q = \frac{(P - 0.2)^2}{(P + 0.85)}$
 $Q = \frac{(2.35 - 0.2)^2}{(2.35 + 0.85)}$
 $Q = 0.787 in$

E.

Previous Cover Area from Worksheet 1
Area = 1,654 s/f

F.

$V_{ff,post} = Q(V_{12})Area$
 $V_{ff,post} = (1") (V_{12})(1,654)$
 $V_{ff,post} = 108.445 ft^3$

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Section IV: Computational Requirements For Stormwater Management Systems

W5

Standard Method Runoff Volume Calculations

Impervious Cover Post-Development Bankfull Runoff Calculations ($V_{p,post}$)

A.

2 year/24 hour storm event
 $P = 2.35in$

B.

Impervious Cover CN From Worksheet 1
 $CN = 98$

C.

$S = \frac{1000}{CN} - 10$
 $S = \frac{1000}{98} - 10$
 $S = 0.20 in$

D.

$Q = \frac{(P - 0.2)^2}{(P + 0.85)}$
 $Q = \frac{(2.35 - 0.2)^2}{(2.35 + 0.85)}$
 $Q = 2.122 in$

E.

Impervious Cover Area from Worksheet 1
Area = 5,060 s/f

F.

$V_{ff,post} = Q(V_{12})Area$
 $V_{ff,post} = (1") (V_{12})(5,060)$
 $V_{ff,post} = 894.639 ft^3$

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Section IV: Computational Requirements For Stormwater Management Systems

W6

Standard Method Runoff Volume Calculations

Previous Cover Post-Development 100-year Storm Runoff Calculations ($V_{100,post}$)

A.

100-year Storm Event
 $P = 5.11in$

B.

Previous Cover CN From Worksheet 1
 $CN = 80$

C.

$S = \frac{1000}{CN} - 10$
 $S = \frac{1000}{80} - 10$
 $S = 2.50 in$

D.

$Q_{100,pre} = \frac{(P - 0.2)^2}{(P + 0.85)}$
 $Q_{100,pre} = \frac{(5.11 - 0.2)^2}{(5.11 + 0.85)}$
 $Q_{100,pre} = 2.989 in$

E.

Previous Cover Area from Worksheet 1
Area = 1,654 s/f

F.

$V_{100,pre} = Q(V_{12})Area$
 $V_{100,pre} = (1") (V_{12})(1,654)$
 $V_{100,pre} = 411.99 ft^3$

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Section IV: Computational Requirements For Stormwater Management Systems

W7

Standard Method Runoff Volume Calculations

Impervious Cover Post-Development 100-year Storm Runoff Calculations ($V_{100,post}$)

A.

100-year Storm Event
 $P = 5.11in$

B.

Impervious Cover CN From Worksheet 1
 $CN = 98$

C.

$S = \frac{1000}{CN} - 10$
 $S = \frac{1000}{98} - 10$
 $S = 0.20 in$

D.

$Q_{100,pre} = \frac{(P - 0.2)^2}{(P + 0.85)}$
 $Q_{100,pre} = \frac{(5.11 - 0.2)^2}{(5.11 + 0.85)}$
 $Q_{100,pre} = 4.873 in$

E.

Impervious Cover CN From Worksheet 1
Area = 5,060 s/f

F.

$V_{100,post} = Q(V_{12})Area$
 $V_{100,post} = (1") (V_{12})(5,060)$
 $V_{100,post} = 2,054.782 ft^3$

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Section IV: Computational Requirements For Stormwater Management Systems

W8

Standard Method Runoff Volume Calculations

Determine Time of Concentration for Applicable Flow Types (T_{100})

Flow Type	%	Channel Elevation	Length (L)	Slope (S)	S ^{1/2}	V ₁₀₀ (ft³)	T ₁₀₀ (hr)
Sheet Flow*	0.48	7.80	67	11.64	3.412	1.638	0.01
Watershed	1.2	0.2	64	0.31	0.559	0.671	0.03
Watershed	1.2						
Watershed	1.2						
Watershed	1.2						
Watershed	1.2						
Watershed	1.2						
Watershed	1.2						
Watershed	1.2						
Watershed	1.2						
Watershed	1.2						
Small Tributary	2.1						
Small Tributary	2.1						
Small Tributary	2.1						
Small Tributary	2.1						
Small Tributary	2.1						
Small Tributary	2.1						
Small Tributary	2.1						
Small Tributary	2.1						
Small Tributary	2.1						
Small Tributary	2.1						
Small Tributary	2.1						

* Sheet flow cannot exceed 100 feet. Anything beyond this is considered waterspout.
Total Time of Concentration (T_{100}) = 0.04

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Section IV: Computational Requirements For Stormwater Management Systems

W9

Standard Method Runoff Volume Calculations

Runoff Summary & Onsite Infiltration Requirement

A. Runoff Summary from Previous Worksheets

First Flush Volume (V_{ff})	449 ft³
Pre-Development Bankfull Runoff Volume ($V_{p,pre}$)	965.958 ft³
Previous Cover Post-Development Bankfull Volume ($V_{p,post}$)	108.445 ft³
Impervious Cover Post-Development Bankfull Volume ($V_{p,post}$)	894.639 ft³
Previous Cover Post-Development 100-year Volume ($V_{100,pre}$)	411.990 ft³
Impervious Cover Post-Development 100-year Volume ($V_{100,post}$)	2,054.782 ft³

Total BF Volume ($V_{BF,pre}$)
1,003 ft³
Total BF Volume ($V_{BF,post}$)
2,467 ft³
Total 100-year Volume (V_{100})
2,467 ft³

B. Determine Onsite Infiltration Requirement

Subtract the Pre-Development Bankfull from the Post-Development Bankfull volume
Total Post-Development Bankfull Volume ($V_{p,post}$)
1,003 ft³
Pre-Development Bankfull Runoff Volume ($V_{p,pre}$)
966 ft³
Bankfull Volume Difference
37 ft³
Compare the Bankfull Volume Difference with the First Flush Volume. The greater of the two is the Onsite Infiltration Requirement.
Onsite Infiltration Requirement (V_{in})
449 ft³

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Section IV: Computational Requirements For Stormwater Management Systems

W10

Standard Method Runoff Volume Calculations

Detention/Retention Requirement

Detention

A.

$Q_p = 238.67 cfs$
 $Q_p = 238.67 cfs$
Peak of the Unit Hydrograph
 $Q_p = 3496 cfs$
 $t_m = 10 min$

B.

Total Site Area (ac) excluding "Self-Crediting" BMPs
Area = 0.154 ac

C.

$Q_{100} = Q_{100,pre} + Q_{100,post}$
 $Q_{100} = 2.989 + 4.873$
 $Q_{100} = 7.86 in$
Note: $Q_{100,pre}$ and $Q_{100,post}$ from W6 and W7, respectively

D.

Peak Flow (FF) = $\frac{Q_p (cfs)}{(1.486) (S^{1/2}) (Area(ac))}$
 $FF = \frac{238.67}{(1.486) (0.154)^{1/2}}$
 $FF = 6.62 cfs$

E.

$\Delta = FF (cfs) \times 0.15 Area(ac)$
 $\Delta = (6.62) \times 0.15 (0.154)$
 $\Delta = 0.15 cfs$

F.

$V_{in} = \frac{\Delta (cfs)}{(2) (FF)} V_{100} (ft³) - V_{ff} (ft³)$
 $V_{in} = \frac{0.15}{(2) (6.62)} (2,467) - 449$
 $V_{in} = 2.009 ft³$
 $V_{in} = \text{Required Detention (ft³)}$

Retention

A.

$V_{in} = 2(V_{in})$
 $V_{in} = 2(2.009)$
 $V_{in} = 4.018 ft³$

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Section IV: Computational Requirements For Stormwater Management Systems

W11

Standard Method Runoff Volume Calculations

Determine Applicable BMPs and Associated Volume Credits

Proposed BMP*	Area (ft²)	Storage Volume* (ft³)	Ave. Design Infiltration Rate (in./hr)	Infiltration Volume During Storm* (ft³)	Total Volume Reduction* (ft³)
Potential Permeable Infiltration Bed					
Infiltration Basin					
Subsurface Infiltration Bed					
Infiltration Trench					
Rain Garden/Bioretenion					
Dry Well					
Bioretion					
Vegetated Filter Strip					
Green Roof					

Total Volume Reduction Credits by Proposed Structural BMPs (ft³)
Runoff Volume Infiltration Requirement (V_{in}) from Worksheet 9 -
Runoff Volume Credit (ft³) =

* Complete checklist from Chapter VI for each structural BMP type
* Storage volume is defined in individual BMP write-ups
* Approximate the average design infiltration rate over 6 hours multiplied by the BMP area
Infiltration Rate = 6 hours x BMP Area x Unit Conversion = Infiltration Volume (ft³)
* Total Volume Reduction Credits is the sum of the Storage Volume and the Infiltration Volume During Storm

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Section IV: Computational Requirements For Stormwater Management Systems

W12

Natural Features Inventory

1. Provide Natural Resources Map. This map should identify waterbodies, floodplains, riparian areas, wetlands, woodlands, natural drainage ways, steep slopes and other natural features.

2. Summarize the existing extent of each natural resource in the Existing Natural Resources Table.

3. Summarize total proposed Protected/Undisturbed Area.

4. Do not count any area twice. For example, an area that is both a floodplain and a wetland may only be considered once (include as either floodplain or wetland, not both).

Existing Natural Resources	Mapped (yes, no, n/A)	Total Area (ac)	Protected/Undisturbed Area (ac)
Waterbodies			
Floodplains			
Riparian Areas			
Wetlands			
Woodlands			
Natural Drainage Area			
Steep Slopes, 15% - 25%			
Steep Slopes, over 25%			
Special Habitat Areas			
Other			
TOTAL EXISTING (ac)			

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Section IV: Computational Requirements For Stormwater Management Systems

W13

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

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Section IV: Computational Requirements For Stormwater Management Systems

W14

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

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Section IV: Computational Requirements For Stormwater Management Systems

W15

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

42

Section IV: Computational Requirements For Stormwater Management Systems

W16

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

43

Section IV: Computational Requirements For Stormwater Management Systems

W17

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

44

Section IV: Computational Requirements For Stormwater Management Systems

W18

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

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Section IV: Computational Requirements For Stormwater Management Systems

W19

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

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Section IV: Computational Requirements For Stormwater Management Systems

W20

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

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Section IV: Computational Requirements For Stormwater Management Systems

W21

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

48

Section IV: Computational Requirements For Stormwater Management Systems

W22

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

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Section IV: Computational Requirements For Stormwater Management Systems

W23

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

50

Section IV: Computational Requirements For Stormwater Management Systems

W24

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

51

Section IV: Computational Requirements For Stormwater Management Systems

W25

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, V_{det}	2,009 ft³
Net Required Detention Volume ($V_{det} - \text{Designed/Provided Infiltration Volume}$)	2,009 ft³

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided)	100 %
Net % Penalty (20% x % Required Infiltration NOT Provided)	20 %
Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume]	2,411 ft³

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Section IV: Computational Requirements For Stormwater Management Systems

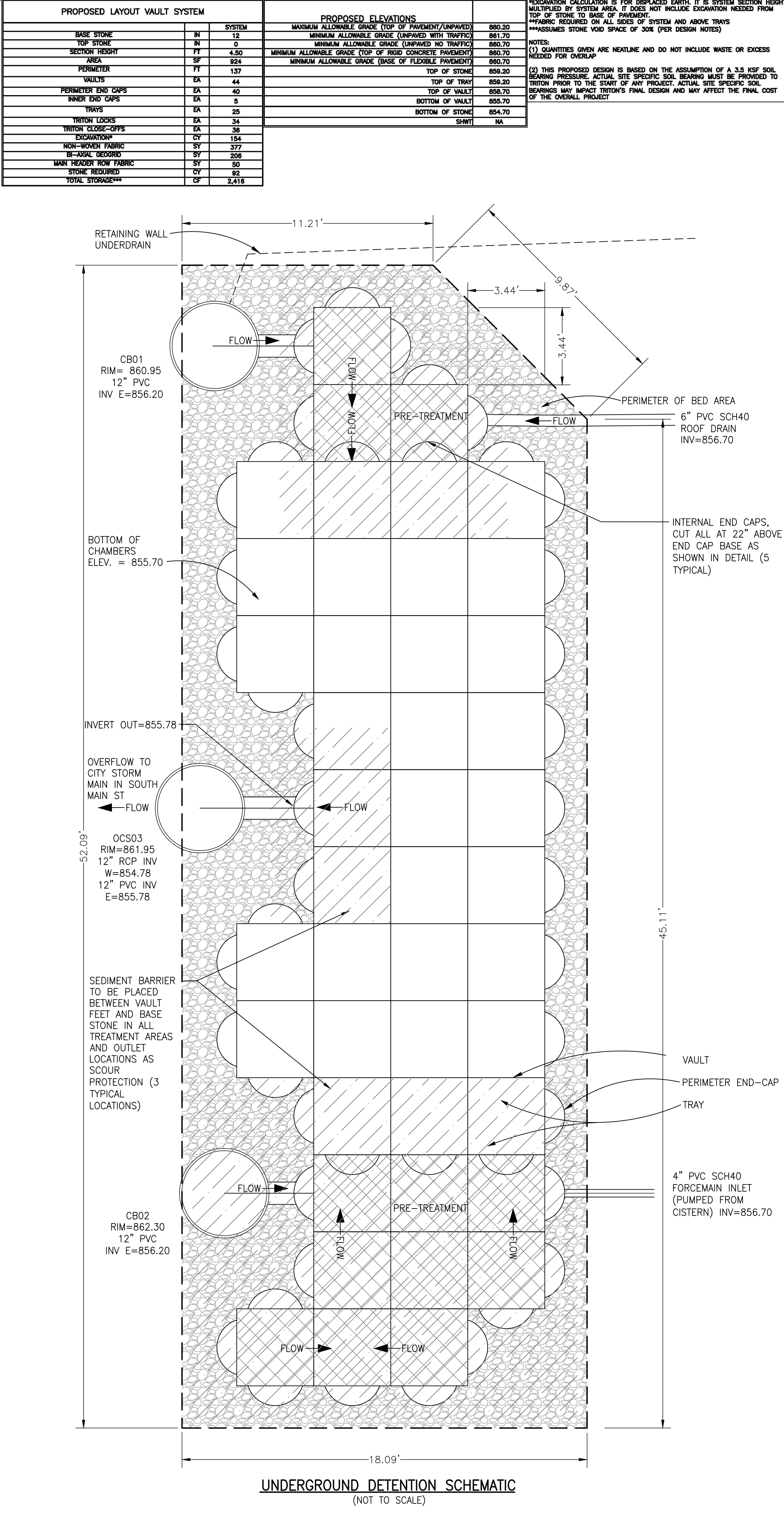
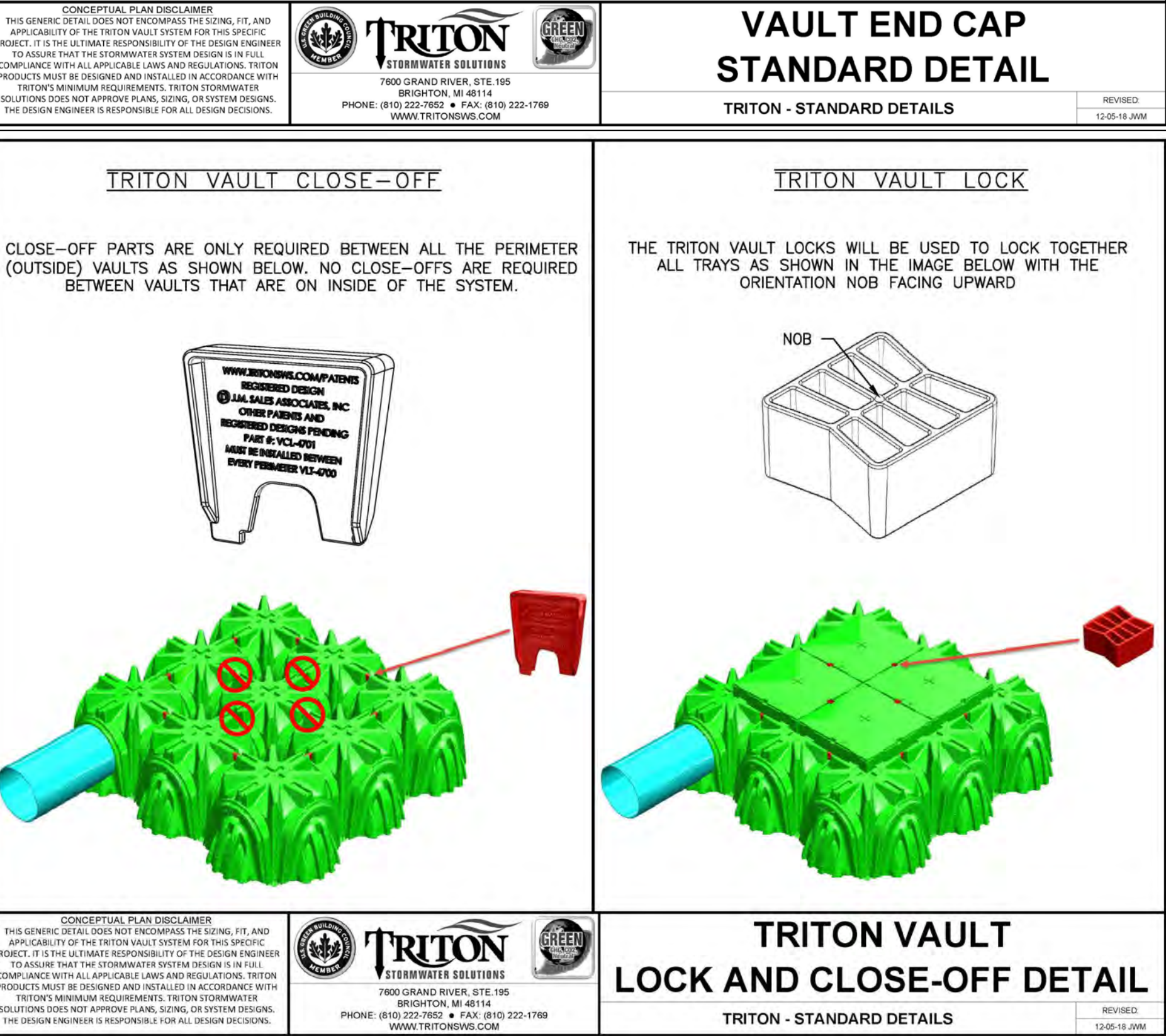
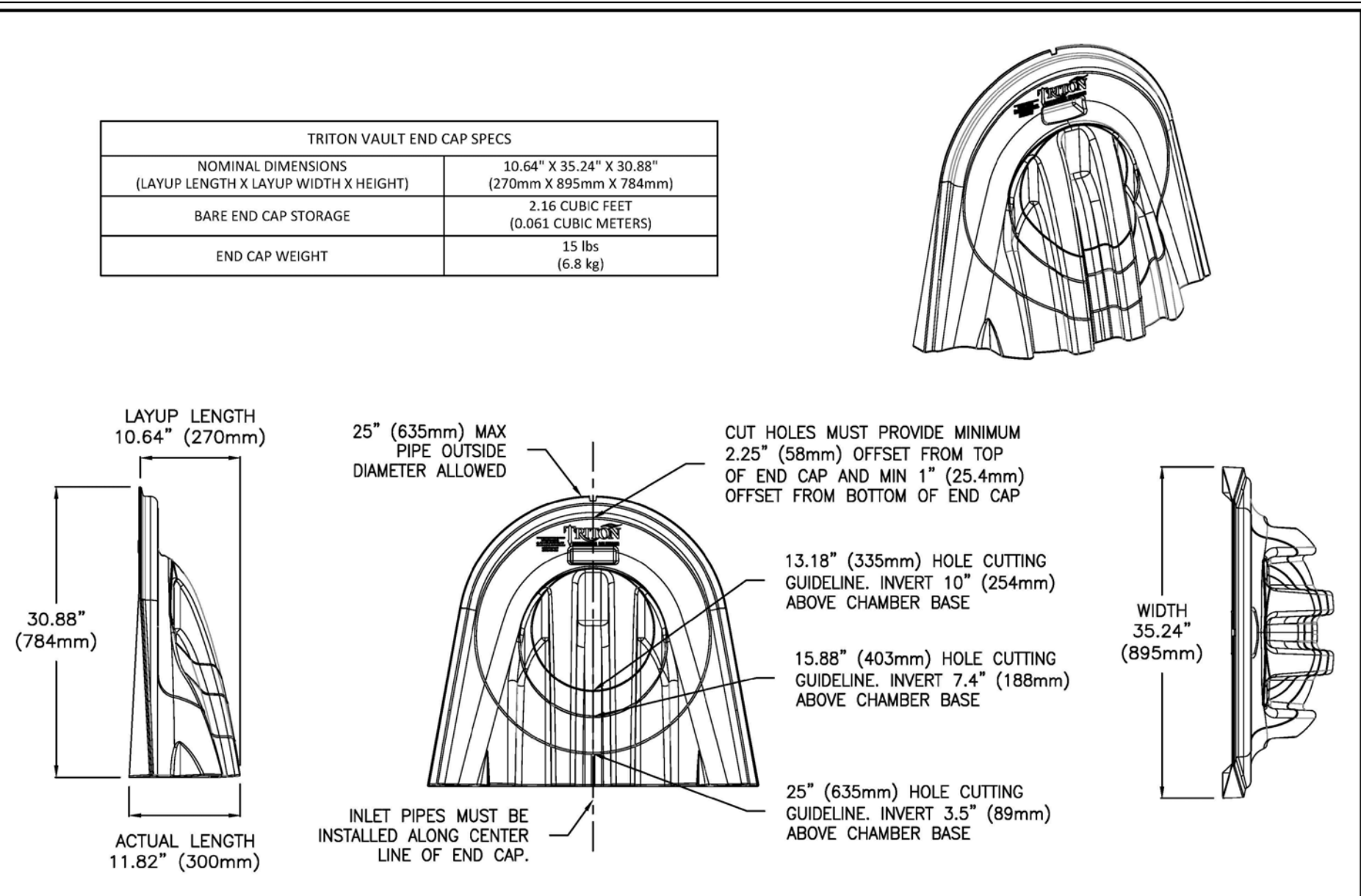
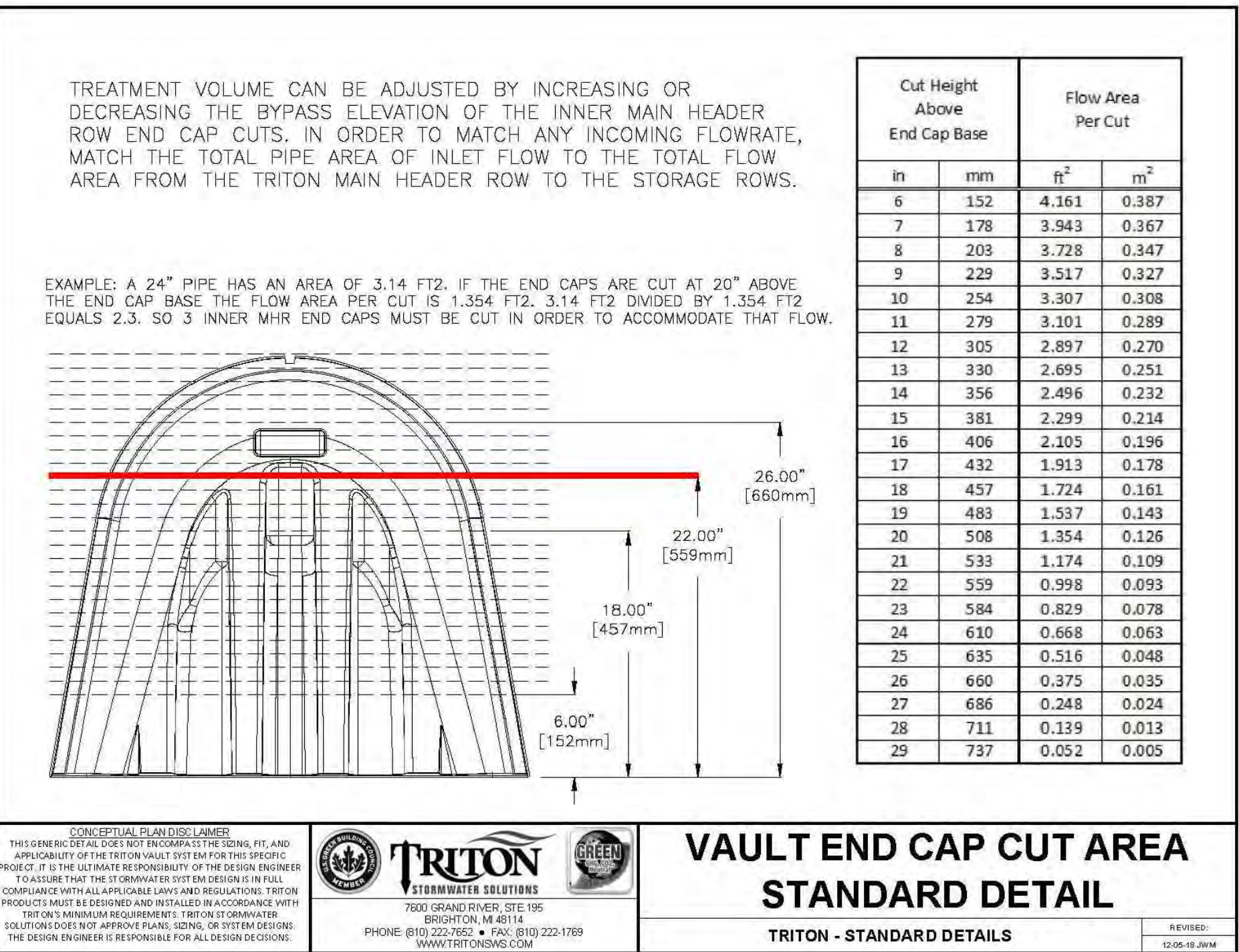
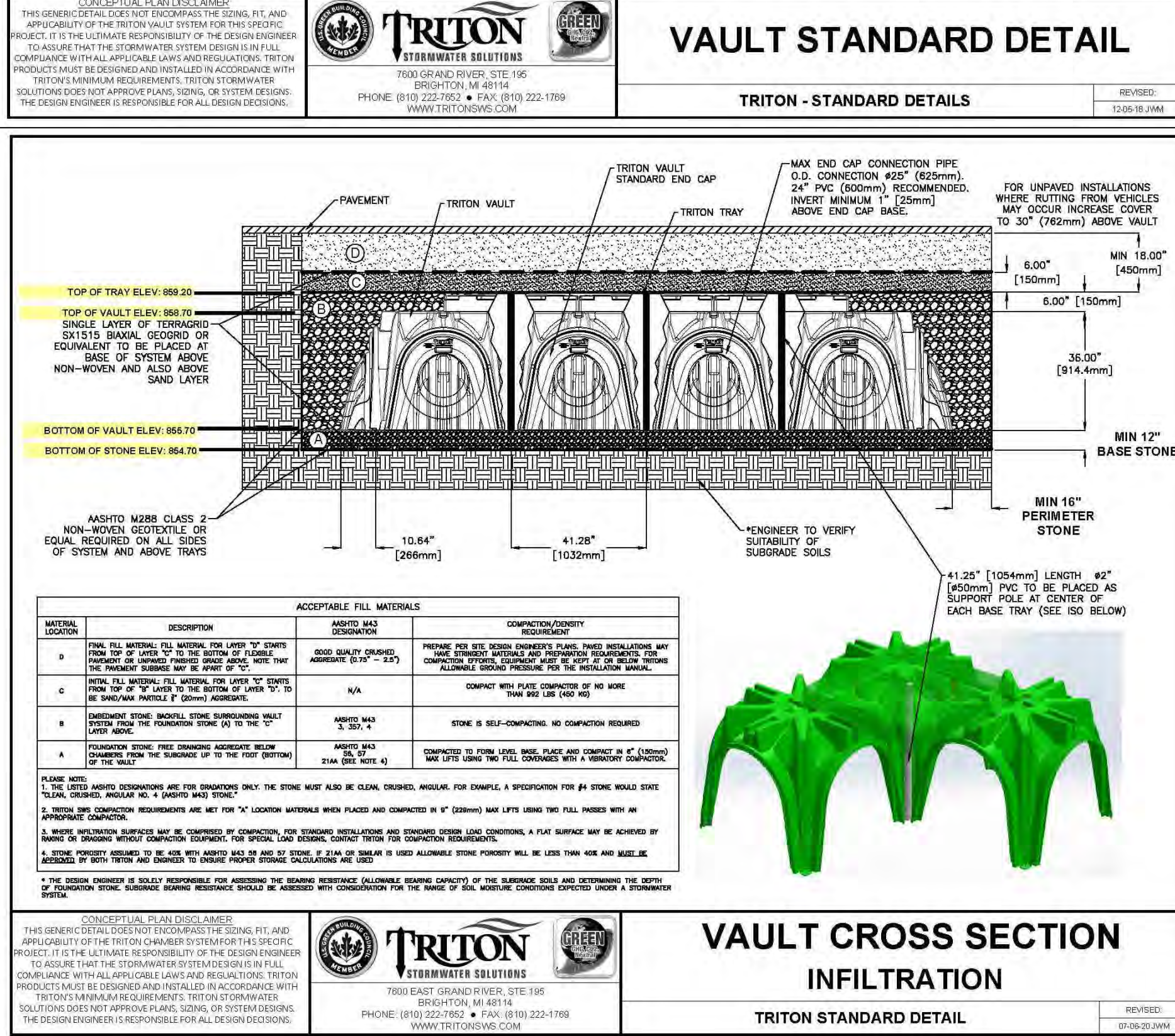
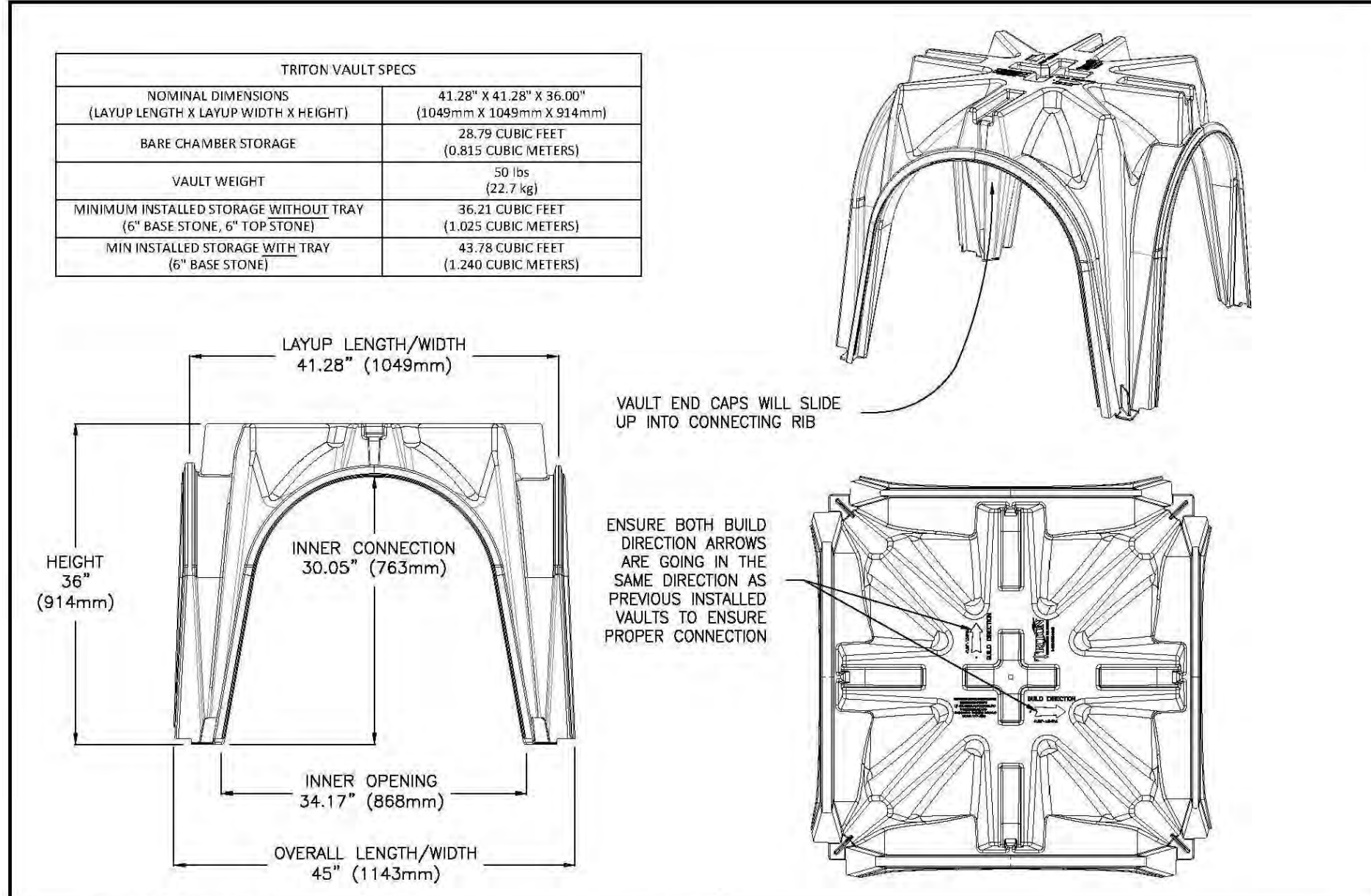
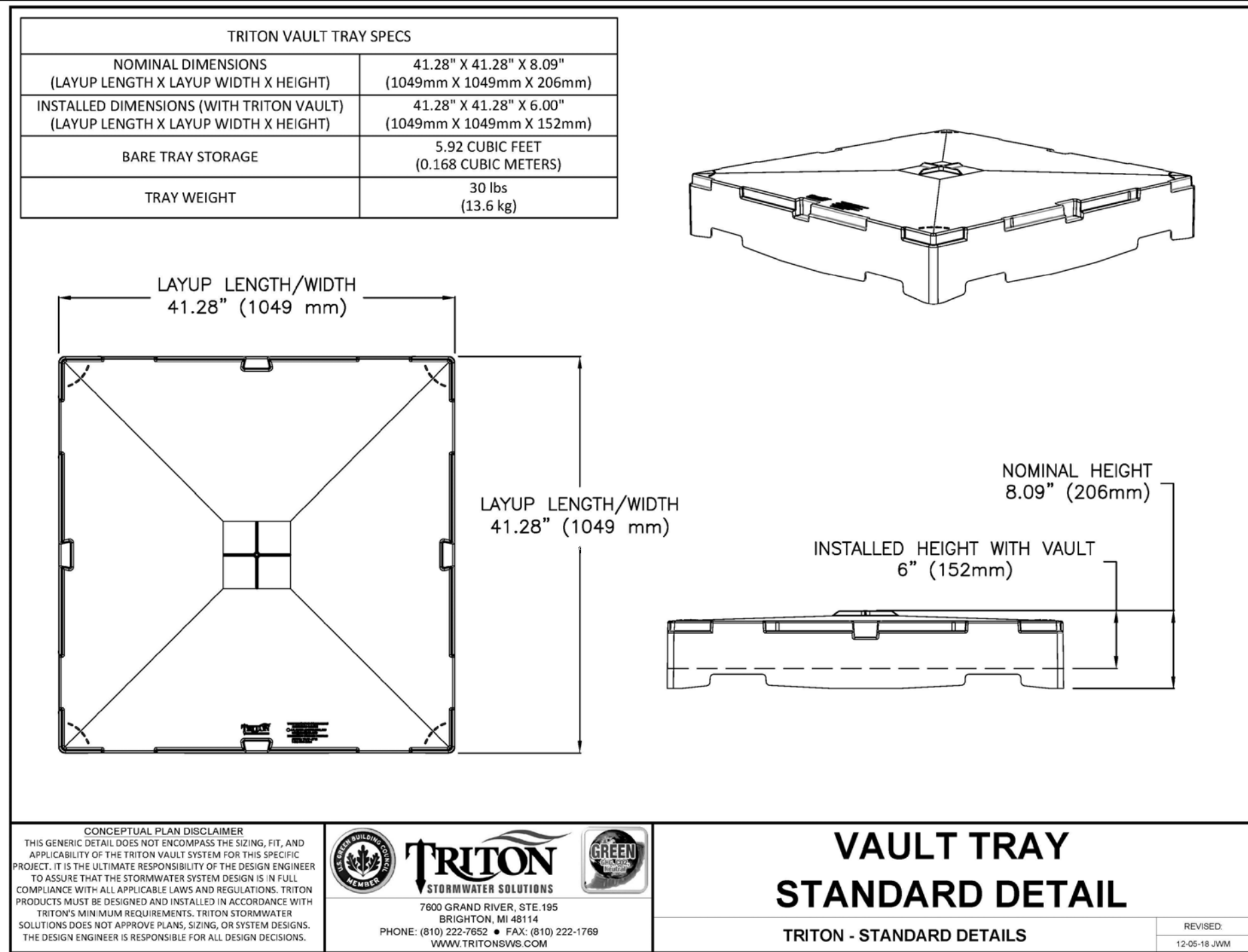
W26

Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement, V_{in}	449 ft³
Designed/Provided Infiltration Volume	0 ft³
% Minimum Required Infiltration Provided	0 %
Total Calculated Detention Volume, $V_{det}</$	



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BEBOSS ENGINEERING, PLLC
3121 E. GRAND RIVER AVE.
HOWELL, MI, 48843
517.546.4836 FAX 517.548.1670

PROJECT: MAIN & DAVIS APARTMENTS
PREPARED FOR: NEST CAPITAL MANAGEMENT LLC
383 WEST BROADWAY 3RD FLOOR
NEW YORK, NEW YORK 10012
917-288-4388

TITLE: STORMWATER CONSTRUCTION DETAILS

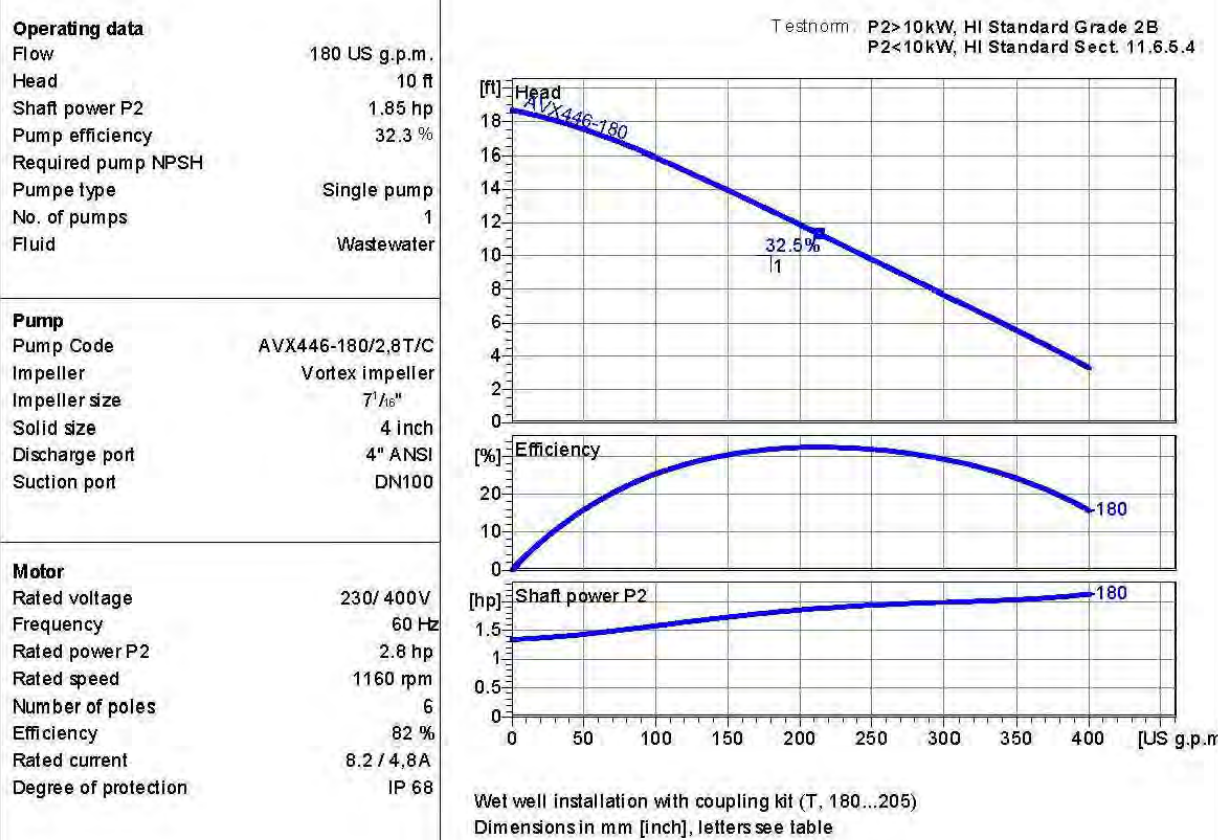
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DRAWN BY: PC
CHECKED BY: PC

SCALE: AS NOTED
JOB NO. 18-434
DATE 4-10-20

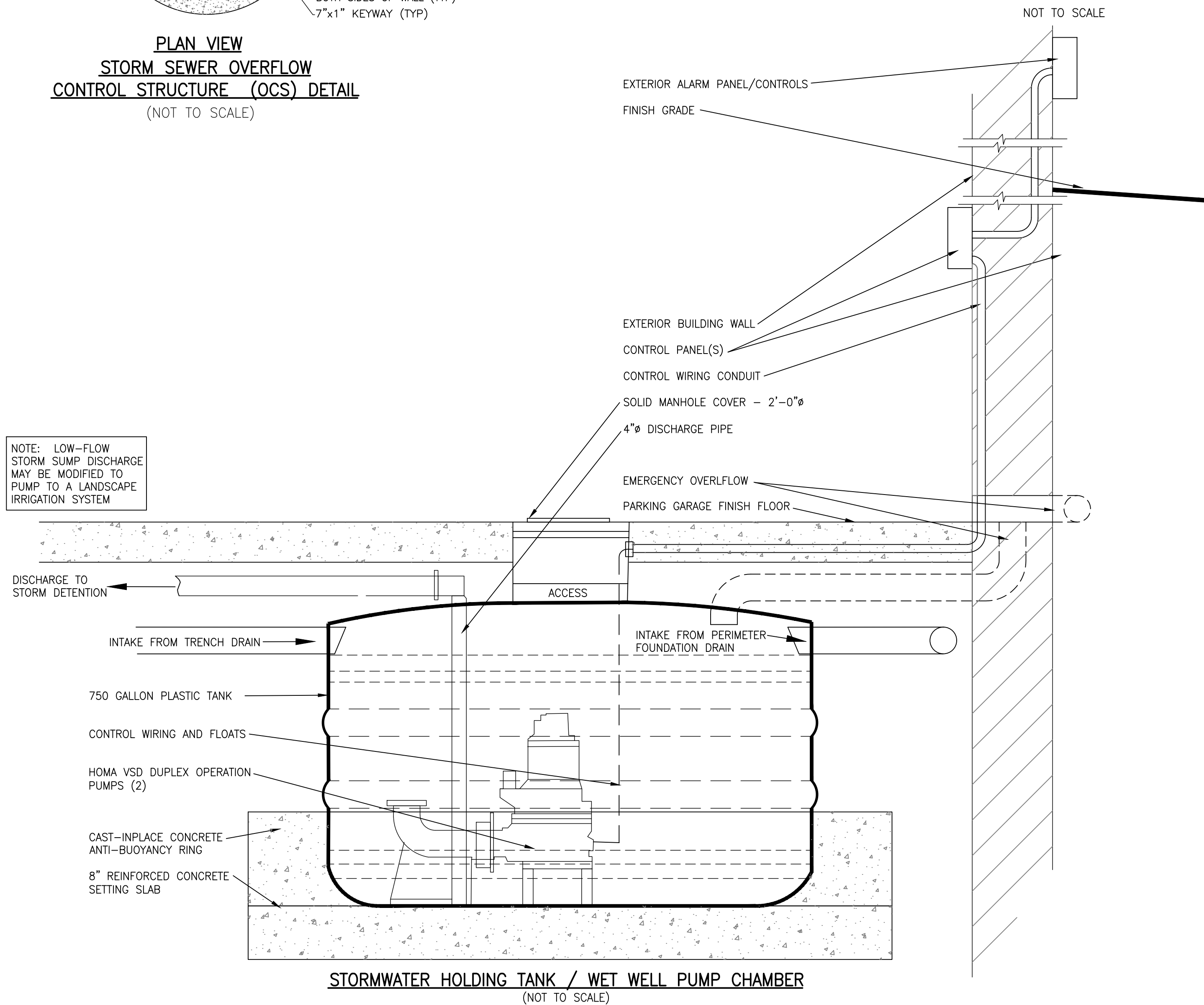
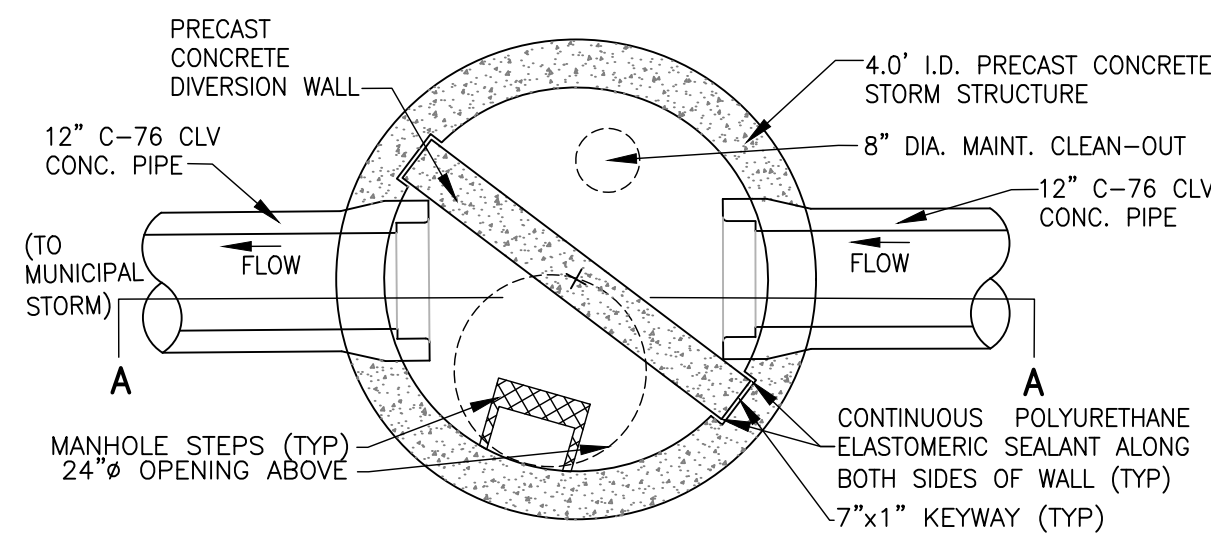
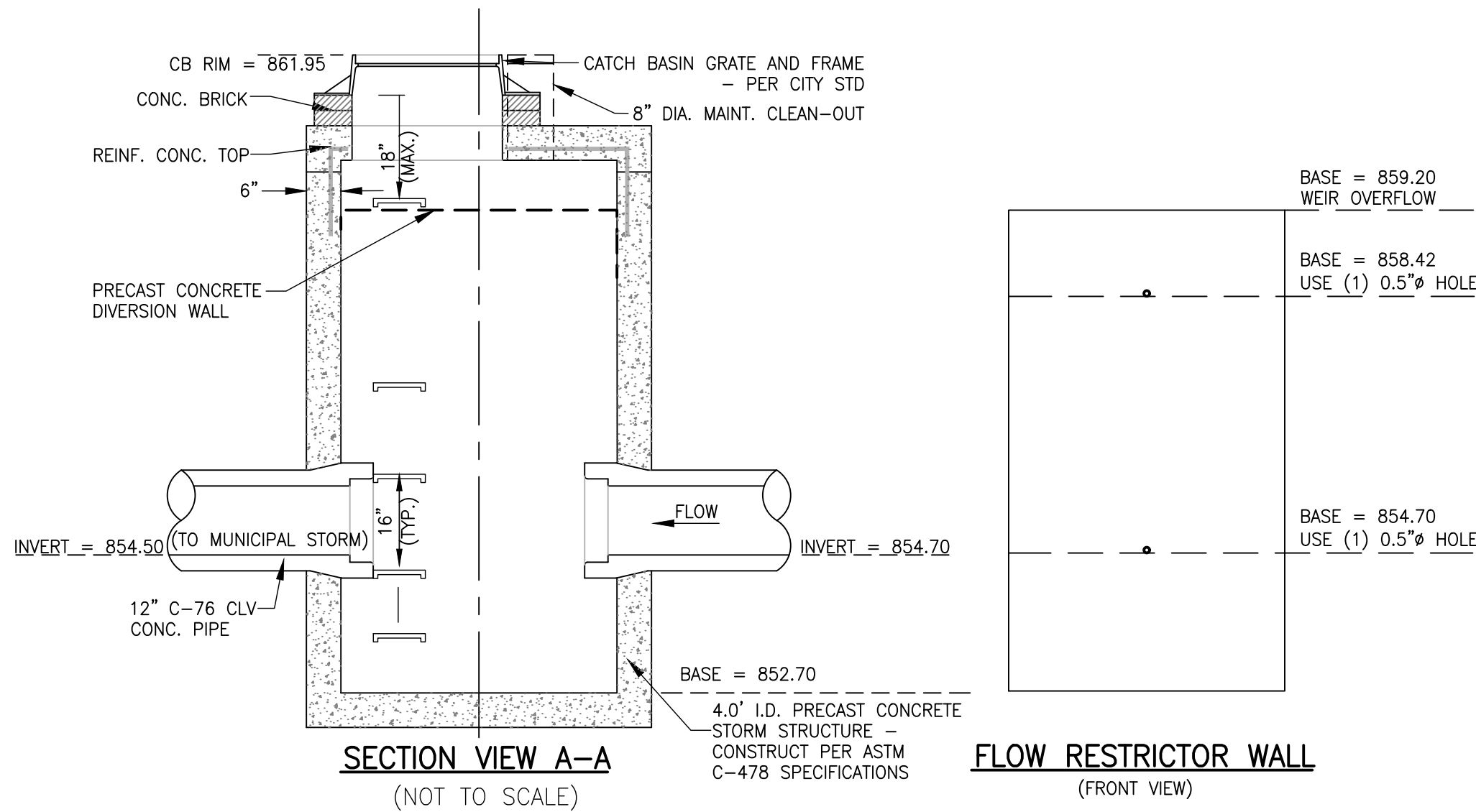
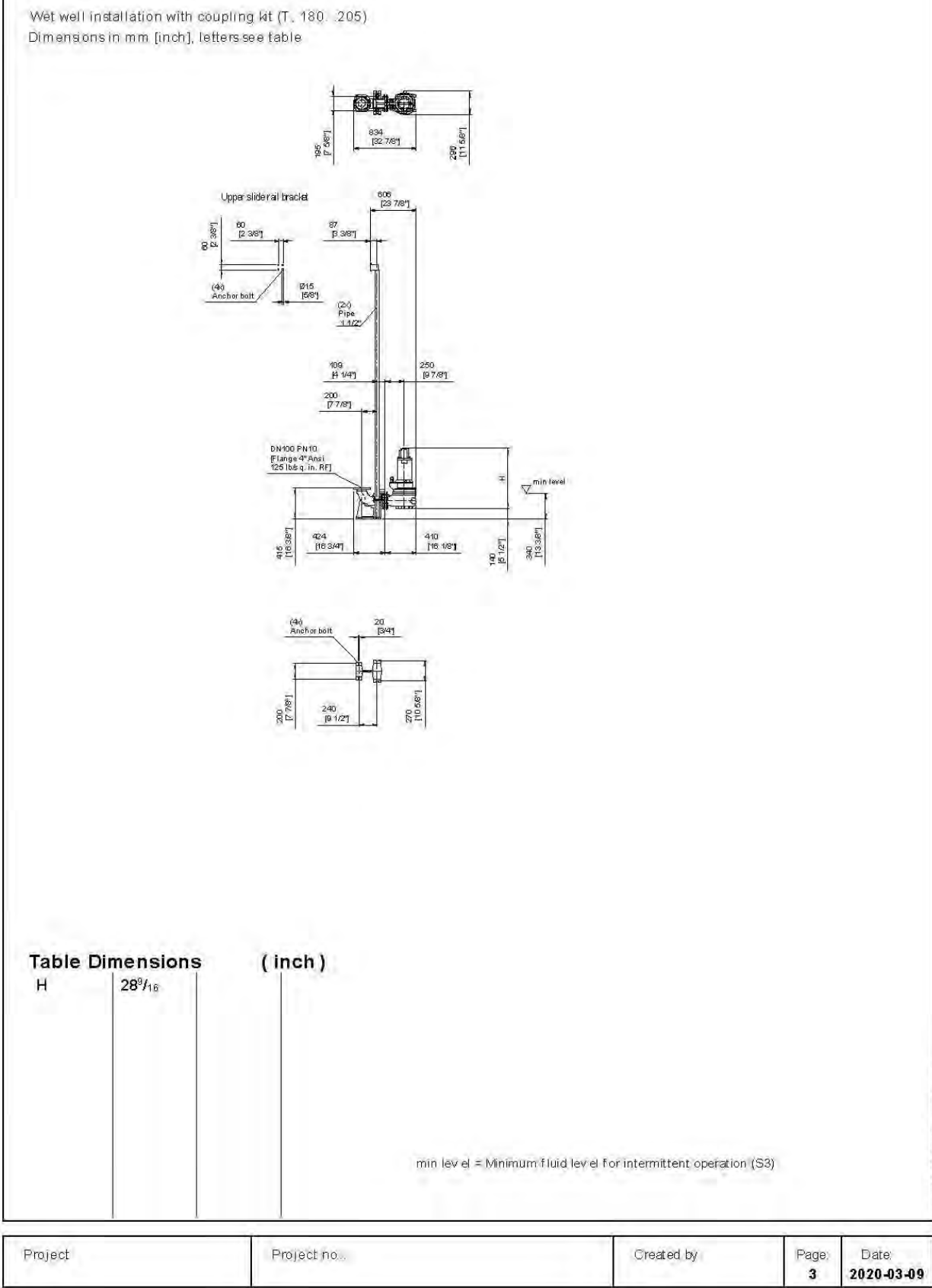
SHEET NO. C8E

BOSS ENGINEERING

Technical Information
AVX446-180/2,8T/C

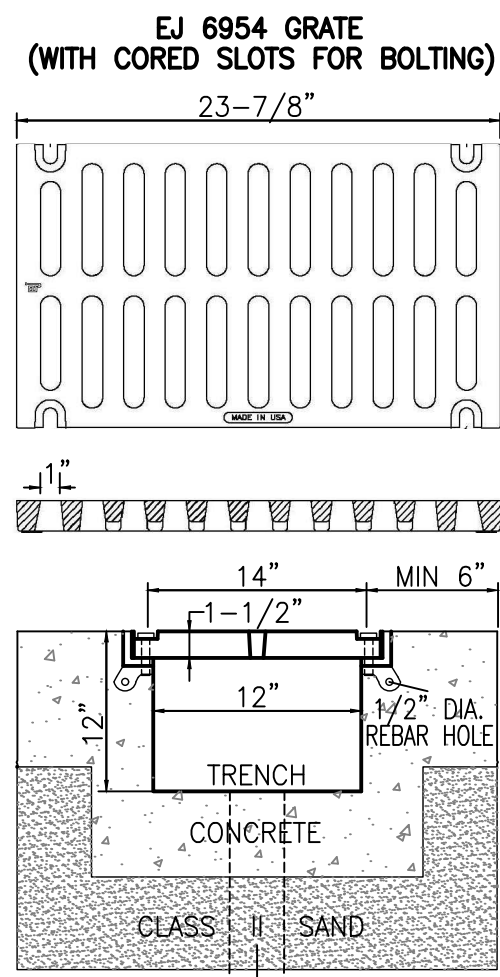


Dimensions
AVX446-180/2,8T/C

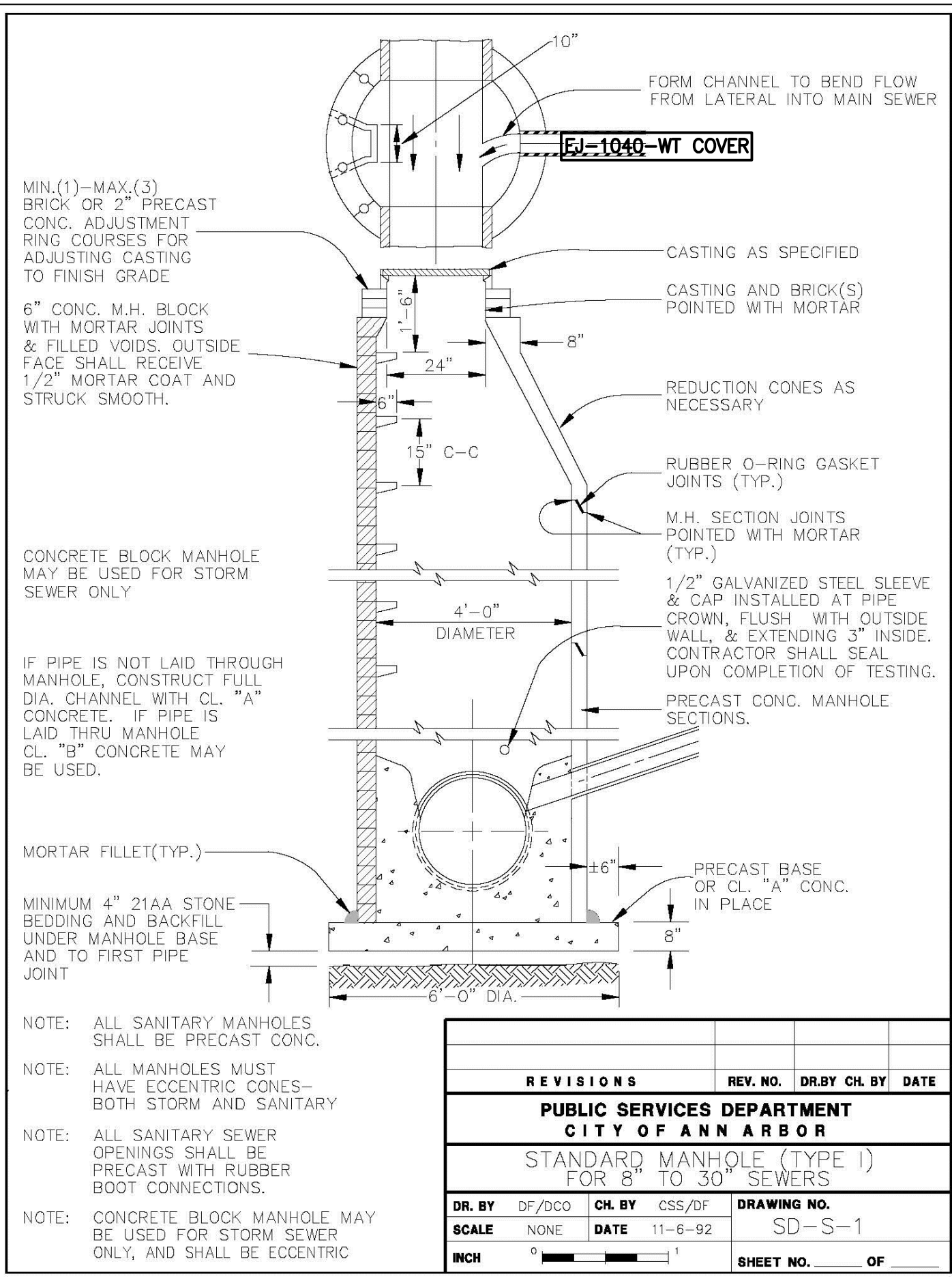


TRIPLEX STORM WATER PUMP STATION

- COMPONENT DESCRIPTION AS FOLLOWS:
1. CONTROL PANEL FOR TWO (2) SUBMERSIBLE PUMPS TO BE ABLE TO OPERATED TOGETHER OR SEPARATELY.
 2. THREE-PHASE 230V POWER SUPPLY
 3. NEMA 4X FIBERGLASS ENCLOSURE (RATED FOR OUTDOOR MOUNTING)
 4. CIRCUIT BREAKER FOR EACH PUMP
 5. CIRCUIT BREAKERS FOR CONTROL SYSTEM.
 6. STEP-DOWN TRANSFORMER FOR CONTROL POWER IN PANEL.
 7. ACROSS-THE-LINE STARTERS.
 8. LIGHTNING ARRESTOR AND SURGE PROTECTION.
 9. FLOAT CONTROL OPERATION, 3 FLOATS (MINIMUM 3 LEVEL OPERATIONAL CAPACITIES)
 10. PUMP START RELAY.
 11. START AND RUN CAPACITORS.
 12. HOMA GO SWITCHES, GS 1050 (MOISTURE AND THERMAL PUMP PROTECTION RELAYS) IN PANEL
 13. H-O-A SELECTOR SWITCHES
 14. HIGHWATER ALARM WITH INDICATOR LIGHT
 15. PUMP SEAL FAIL INDICATOR LIGHT
 16. PUMP HIGH TEMPERATURE INDICATOR LIGHT
 17. PUMP OVERLOAD INDICATOR LIGHT
 18. PUMP ALTERNATION CAPABILITIES
 19. PUMP RUN INDICATOR LIGHT
 20. PUMP ELAPSED TIME METERS - EACH PUMP
 21. PANEL HEATER
 22. ALARM RESET /SILENCE
 23. EXTERIOR ALARM LIGHT ON PANEL ENCLOSURE
 24. ALARM CONTACTS (HIGH WATER ALARM, POWER FAIL, PUMP 1 OVERLOAD ALARM, PUMP 1 SEAL FAIL, PUMP 1 THERMAL ALARM, PUMP 2 OVERLOAD ALARM, PUMP 2 SEAL FAIL, PUMP 2 THERMAL ALARM)
 25. UL LISTED PANEL



TRENCH GRATE WITH SIDE FRAME



BEBOSS
Engineering
Engineers Surveyors Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
517.546.4836 FAX 517.548.1670

PROJECT: MAIN & DAVIS APARTMENTS

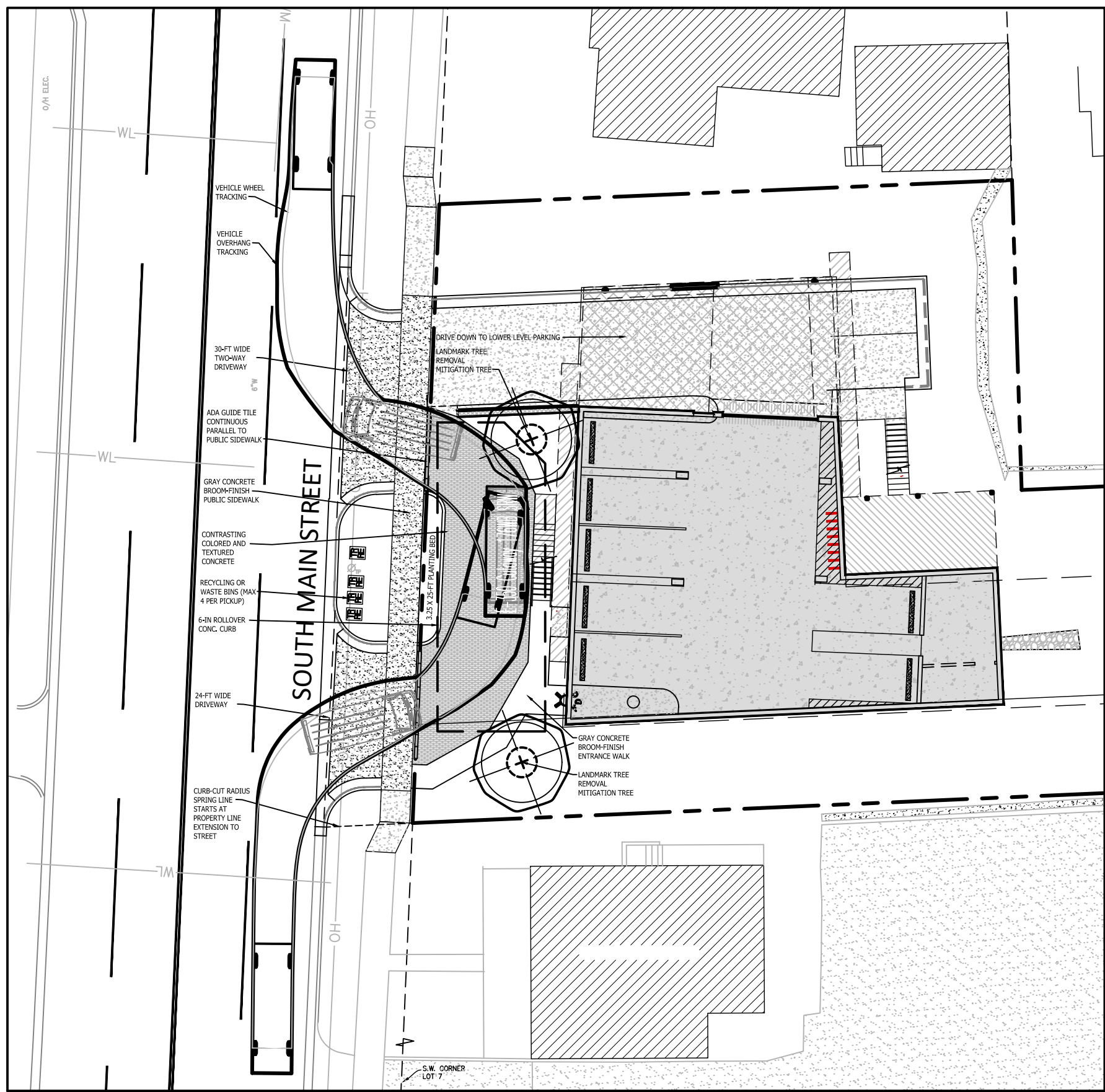
PREPARED FOR: NEST CAPITAL MANAGEMENT LLC
383 WEST BROADWAY 3RD FLOOR
NEW YORK, NEW YORK 10012
917-288-4388

TITLE: STORMWATER TANK & PUMP CONST. DETAILS

NO	BY	REVISION	PER	DATE
1	PC	CITY REVIEW COMMENTS		6-5-20
2	PC	CITY REVIEW COMMENTS		7-20-20
3	PC	CITY REVIEW COMMENTS		9-11-20
4	PC	CITY REVIEW COMMENTS		10-19-20
5	PC	CITY REVIEW COMMENTS		11-5-20
DESIGNED BY: PC				
DRAWN BY: PC				
CHECKED BY:				
SCALE AS NOTED				
JOB NO. 18-434				
DATE 4-10-20				
SHEET NO. C8F				

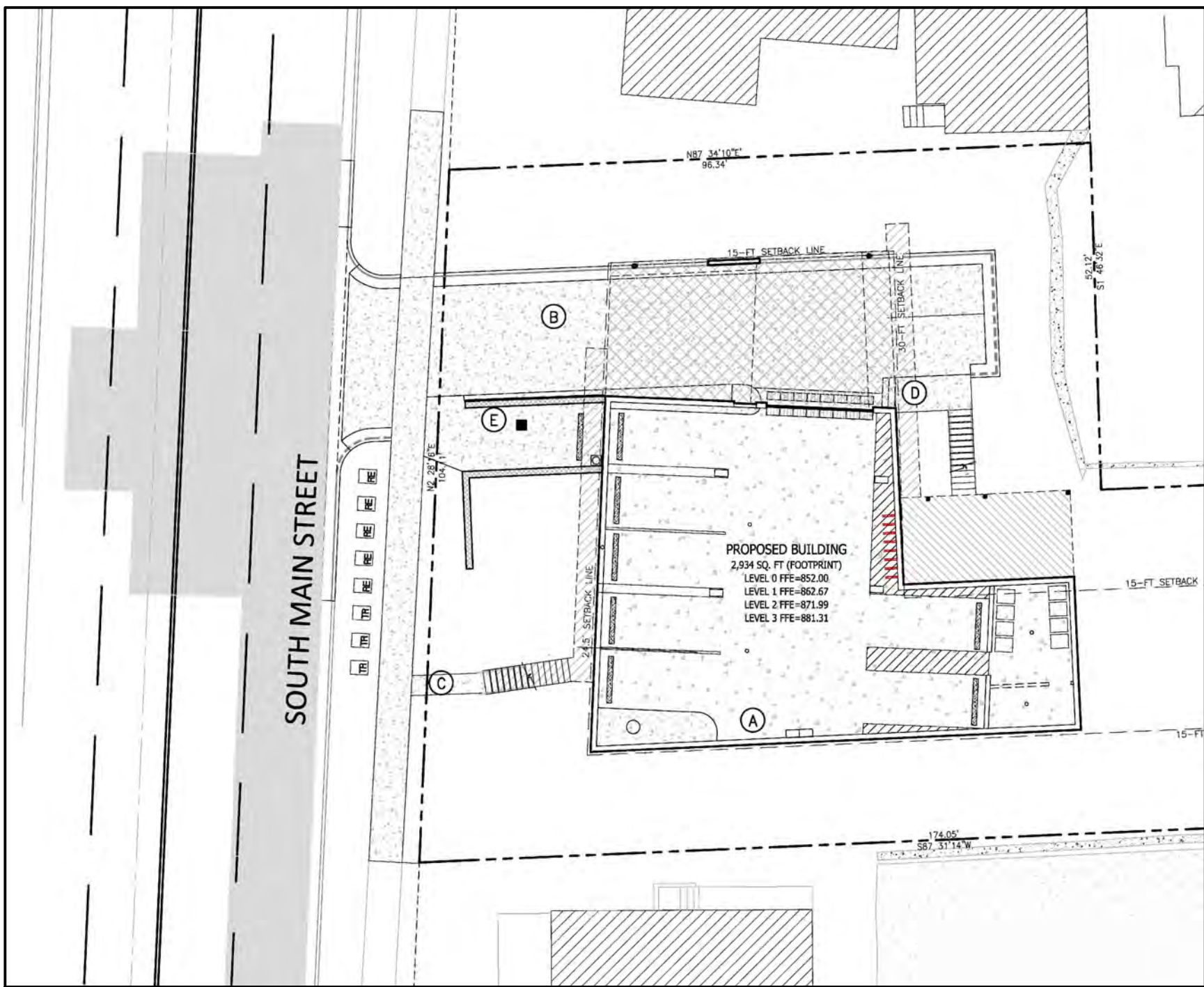


LOADING ANALYSIS / CIRCULATION PLAN



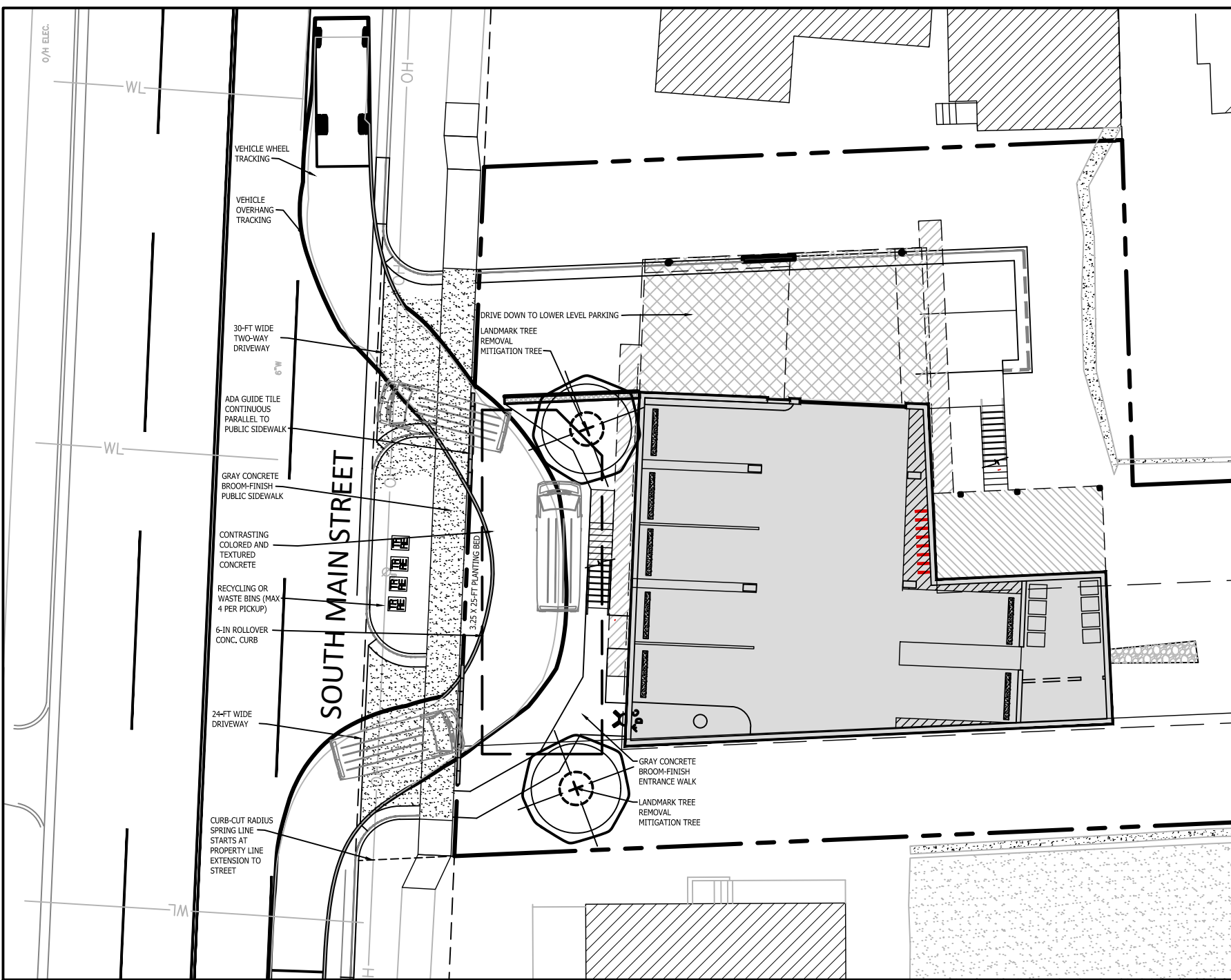
OPTION 2 - DELIVERY VAN DRIVE CIRCLE (PREFERRED)
SCALE: 1" = 20'

- ITEMS OF NOTE:
1. UTILIZES A 2ND 24-FT WIDE DRIVE TO ALLOW FOR VEHICLES TO DRIVE ONTO THE PROPERTY AND EXIT BACK ONTO SOUTH MAIN WITHOUT A NEED TO BACK-UP.
 2. VEHICLE TEMPLATE BASED ON LONG-WHEEL BASE DELIVERY VAN (UPS OR AMAZON TYPE - MAX 23-FT LENGTH).
 3. PUBLIC SIDEWALK / LOADING AREA ADA COMPLIANT DIFFERENTIATION TO BE ACHIEVED THROUGH USE ADA 'GUIDE TILE' AND CONTRASTING COLORED AND TEXTURED CONCRETE.
 4. LOADING AREA WOULD BE SIGNED 'NO PARKING - LOADING/UNLOADING ONLY'.
 5. REQUIRES REMOVAL OF EXISTING LANDMARK TREE (19.5-INCH CAL. SILVER MAPLE) IN THE FRONT YARD, SHOWING 2, 2-1/2 CAL. REPLACEMENT TREES WITH MITIGATION REMAINDER PAYMENT TO TREE FUND.
 6. INCREASES OVERALL IMPERVIOUS SURFACE TO OVER 5,000 SQFT WITH INCREASED STORM WATER CONTROLS (APPROXIMATELY 800 SQ FT OF NEW PAVEMENT).
 7. REQUIRES REFUSE & RECYCLING PICK-UP ON STREET - PROPOSING ALTERNATE DAYS FOR REFUSE & RECYCLE PICK-UP (MAXIMUM 4 CONTAINERS AT ONE TIME) TO MINIMIZE PICK-UP TRAFFIC DELAY TIME.



OPTION 1 - LOADING SPACE
SCALE: 1" = 20'

- ITEMS OF NOTE:
1. OPTION REFLECTS PROPOSED OF 6-05-20
 2. UTILIZES SAME 24-FT WIDE DRIVE FOR PARKING RAMP TO BELOW GRADE PARKING AREA.
 3. ALLOWS FOR A 10-FT WIDE BY 24-FT LONG LOADING AREA FOR DELIVERY, MAIL, LOADING / UNLOADING OR EMERGENCY VEHICLES (AMBULANCE / FIRST RESPONDER).
 4. PRESERVES EXISTING LANDMARK TREE (19.5-INCH CAL. SILVER MAPLE) IN THE FRONT YARD.
 5. PRESERVES LANDSCAPE AREA / PREVIOUS SURFACES. MINIMIZE IMPERVIOUS TO MAXIMUM 4,995 SQ. FT.
 6. REQUIRES REFUSE & RECYCLING PICK-UP ON STREET. PROPOSING ALTERNATE DAYS FOR REFUSE & RECYCLE PICK-UP (MAXIMUM 4 CONTAINERS AT ONE TIME) TO MINIMIZE PICK-UP TRAFFIC DELAY TIME.



OPTION 3 - REFUSE TRUCK DRIVE CIRCLE
SCALE: 1" = 20'

- ITEMS OF NOTE:
1. UTILIZES A 2ND 24-FT WIDE DRIVE TO ALLOW FOR VEHICLES TO DRIVE ONTO THE PROPERTY AND EXIT BACK ONTO SOUTH MAIN WITHOUT NEED TO BACK-UP.
 2. VEHICLE TEMPLATE BASE ON CUSTOM CLEARANCE REQUIREMENTS FOR FRONT LOAD SOLID WASTE VEHICLE FOR THE CITY OF ANN ARBOR (34-FT LENGHT, 8.5-FT WIDTH, 27.2-FT CENTERLINE TURNING RADIUS).
 3. REQUIRES REMOVAL OF EXISTING LANDMARK TREE (19.5-INCH CAL. SILVER MAPLE) IN THE FRONT YARD.
 4. INCREASES IMPERVIOUS SURFACE TO OVER 5,000 SQFT WITH INCREASED STORM WATER CONTROLS.
 5. NO RESTRICTION ON NUMBER OF REFUSE AND RECYCLING CONTAINERS.
 6. RESULTING FRONT YARD AREA IS MOSTLY PAVED. VEHICLE TRACKING TRAVEL OF REFUSE VEHICLE REQUIRES POTENTIAL USE OF PUBLIC SIDEWALK.

THE DESIGN AND ELEMENTS OF DESIGN, INCLUDING UTILITIES, ARE SHOWN ON THESE DRAWINGS ARE ONLY INFORMATION. NO GUARANTEE IS MADE THAT THE DESIGN OR ELEMENTS OF DESIGN WILL BE ACCURATELY REFLECTED ON THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING UTILITIES AND ELEMENTS OF DESIGN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONSTRUCTION OF THE PROJECT WILL BE IN CONFLICT WITH THE UTILITIES SHOWN ON THESE DRAWINGS. THE LOCATION OF UTILITIES SHOWN ON THESE DRAWINGS ARE ONLY INFORMATION. NO GUARANTEE IS MADE THAT THE DESIGN OR ELEMENTS OF DESIGN WILL BE ACCURATELY REFLECTED ON THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING UTILITIES AND ELEMENTS OF DESIGN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONSTRUCTION OF THE PROJECT WILL BE IN CONFLICT WITH THE UTILITIES SHOWN ON THESE DRAWINGS.

PROVIDED BY:
Bmk
DESIGN+PLANNING

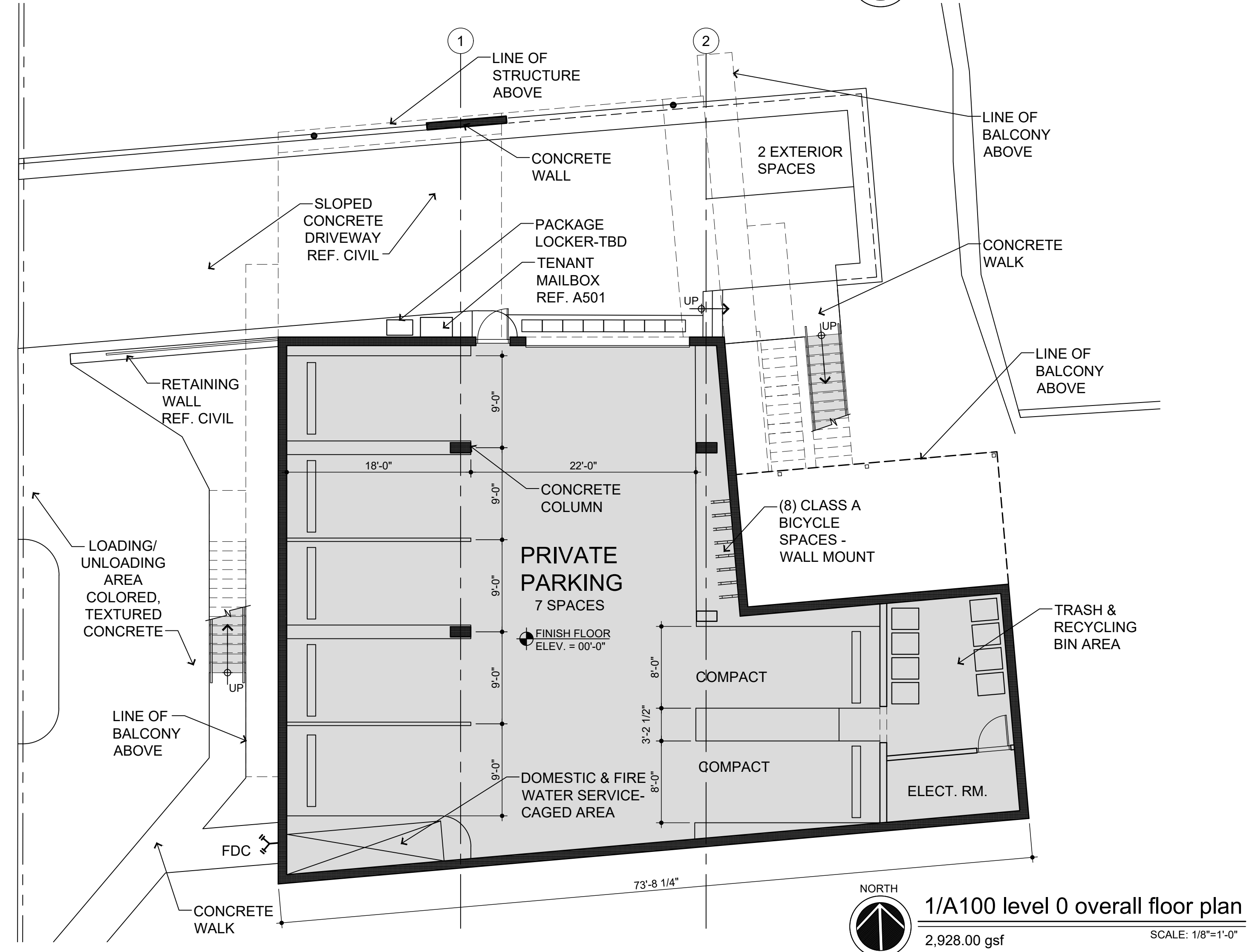
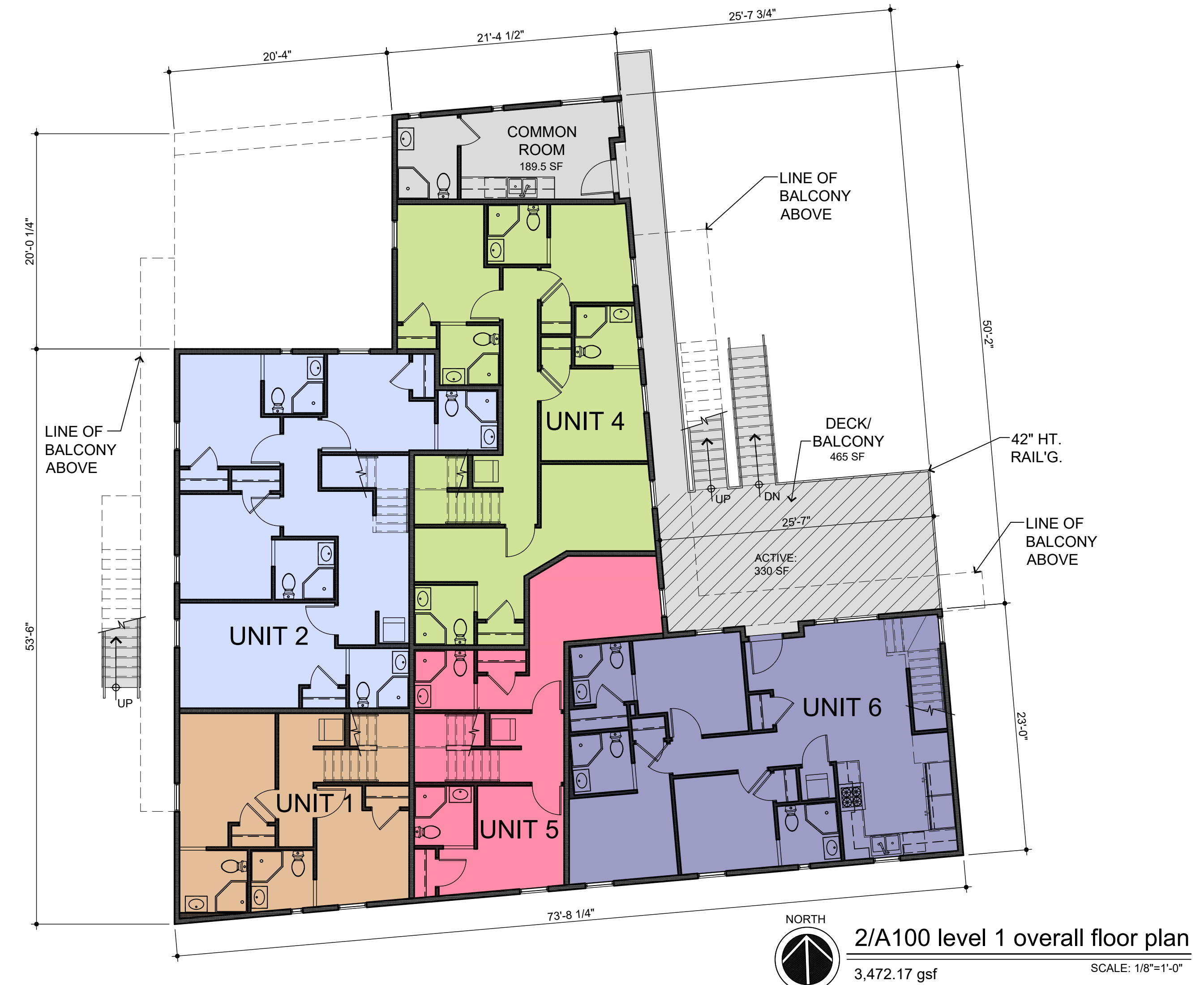
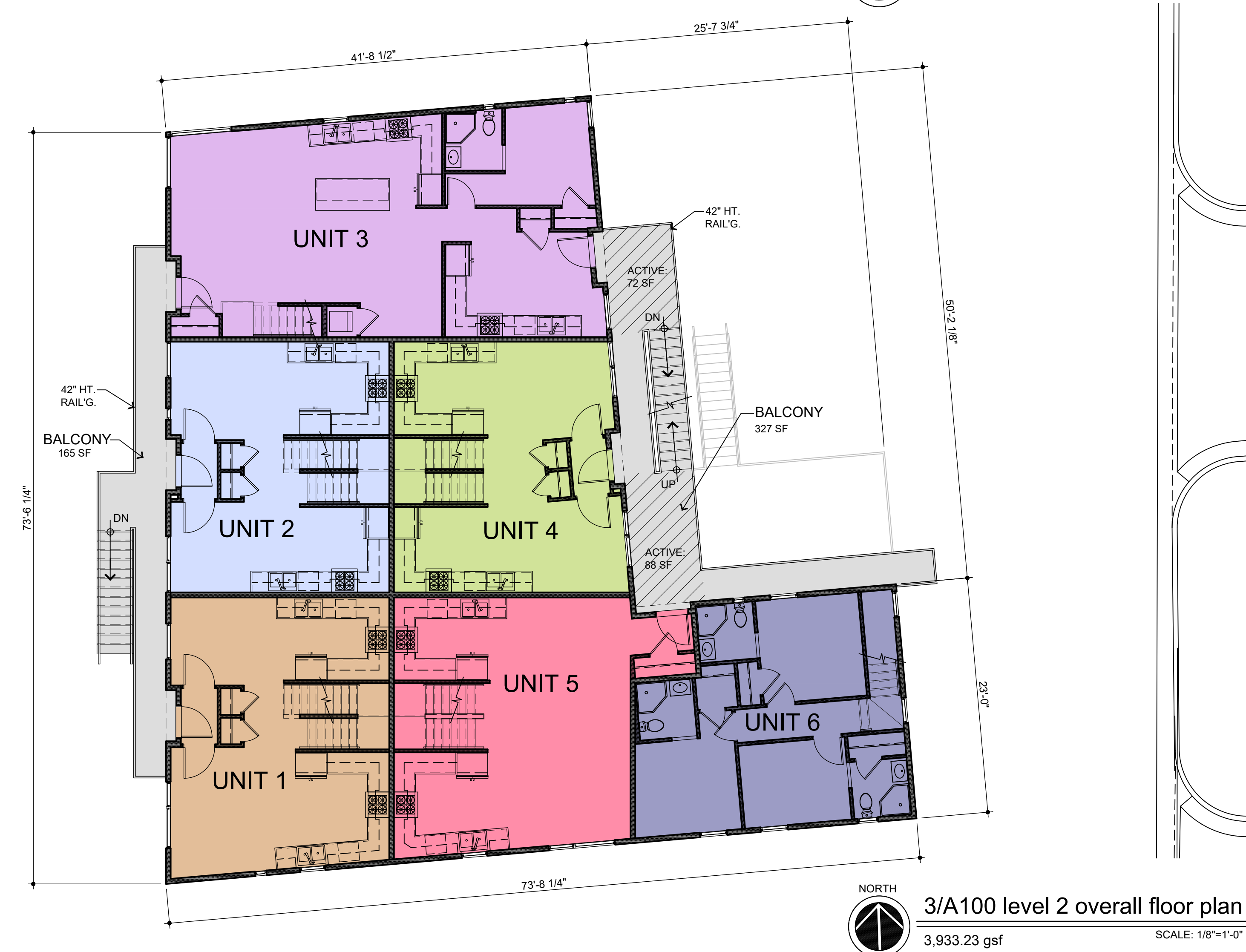
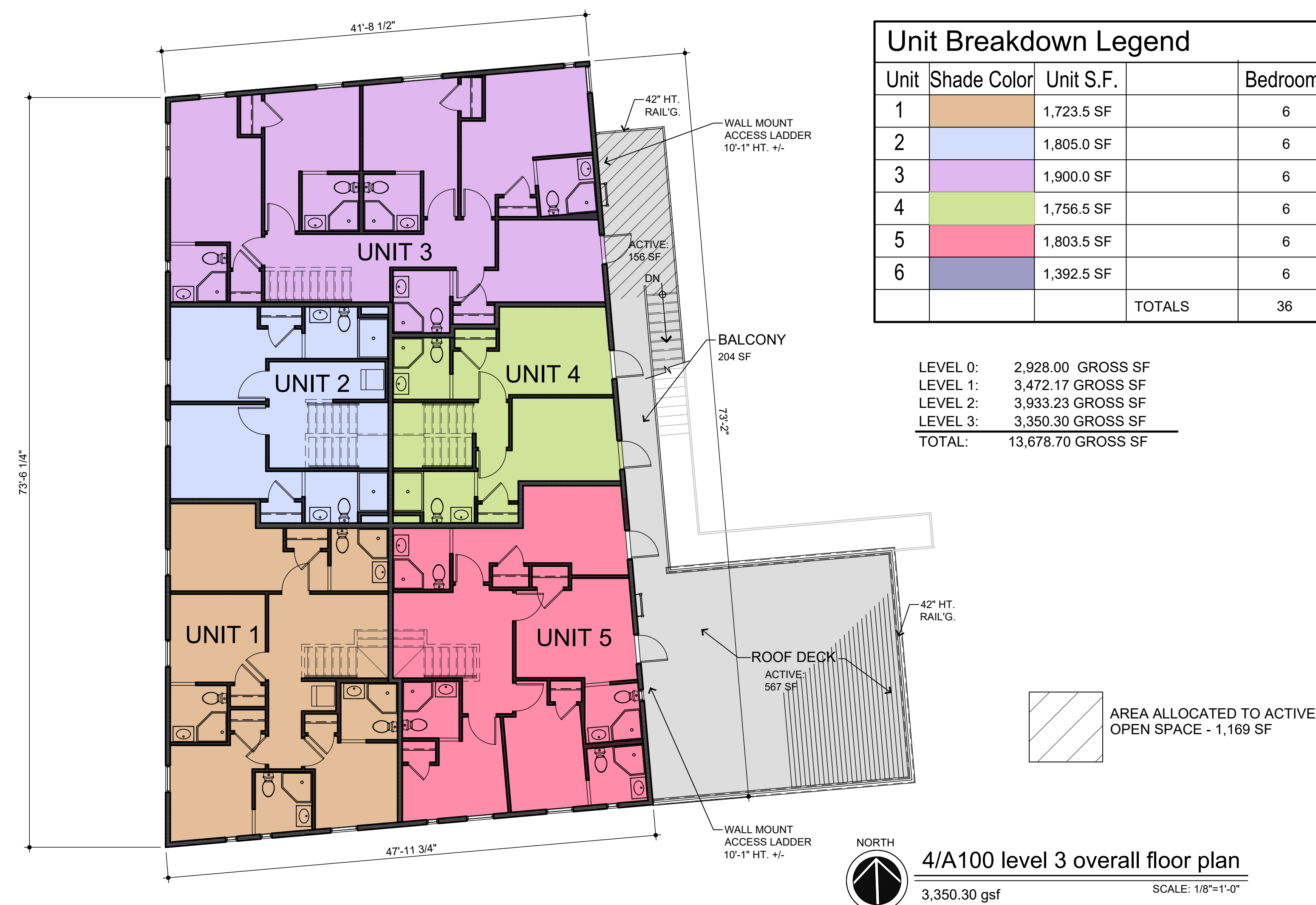
BEBOSS
Engineering
Engineers Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
517.546.4836 FAX 517.548.1670

PROJECT: MAIN & DAVIS APARTMENTS
PREPARED FOR: NEST CAPITAL MANAGEMENT LLC
393 W BROADWAY #301B
NEW YORK, NY 10012
917.288.4388
TITLE: LOADING ANALYSIS / CIRCULATION PLAN

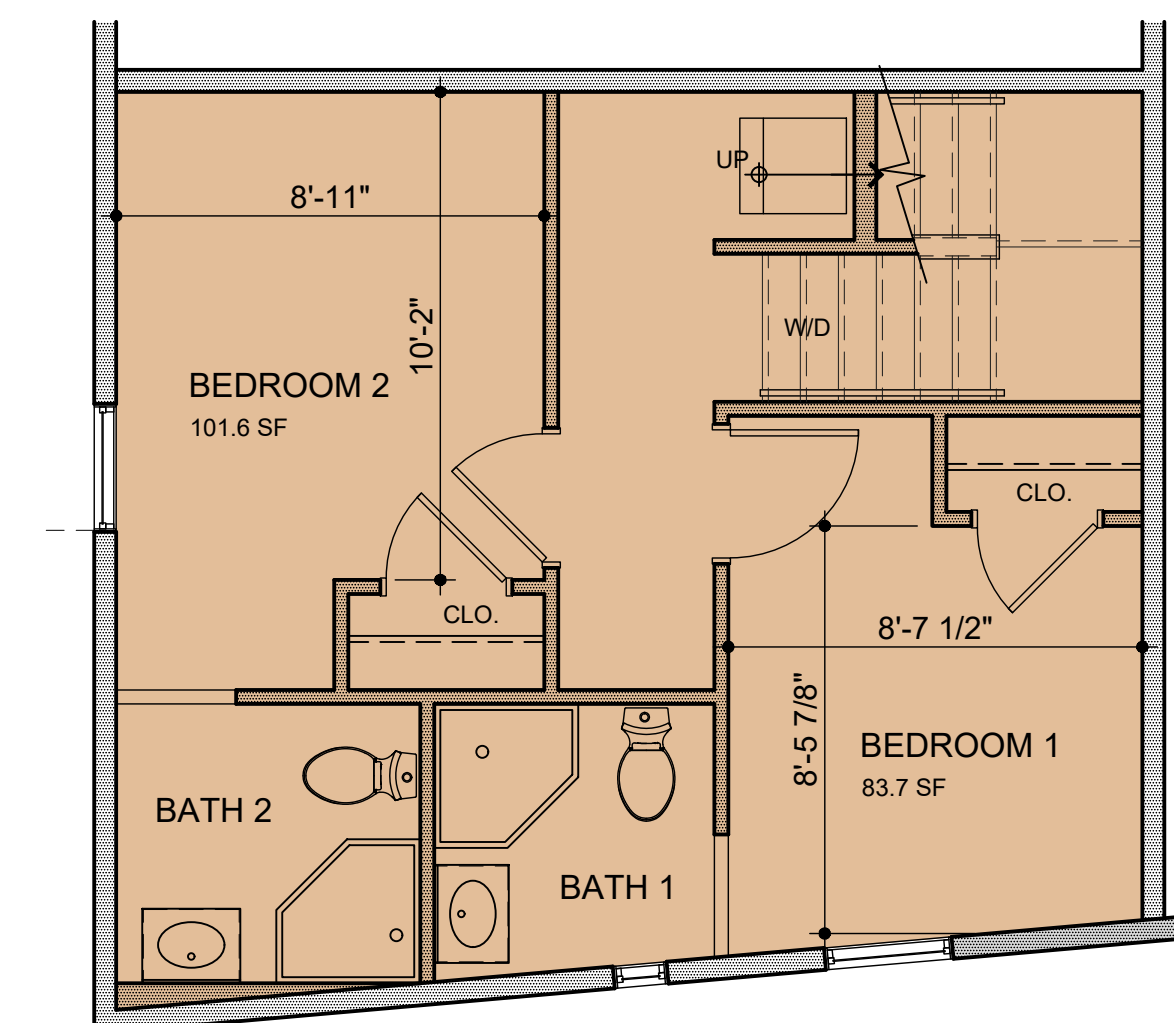
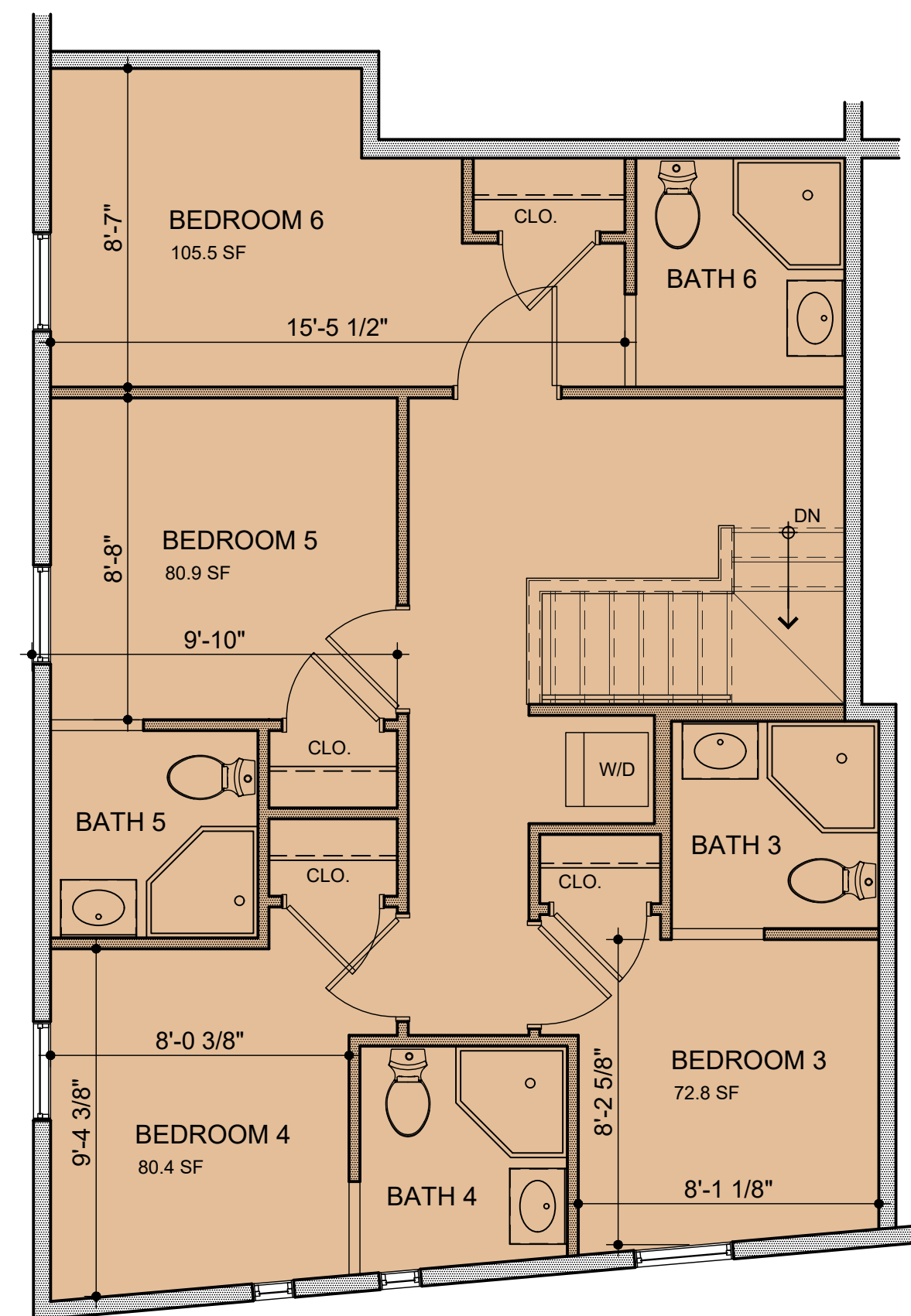
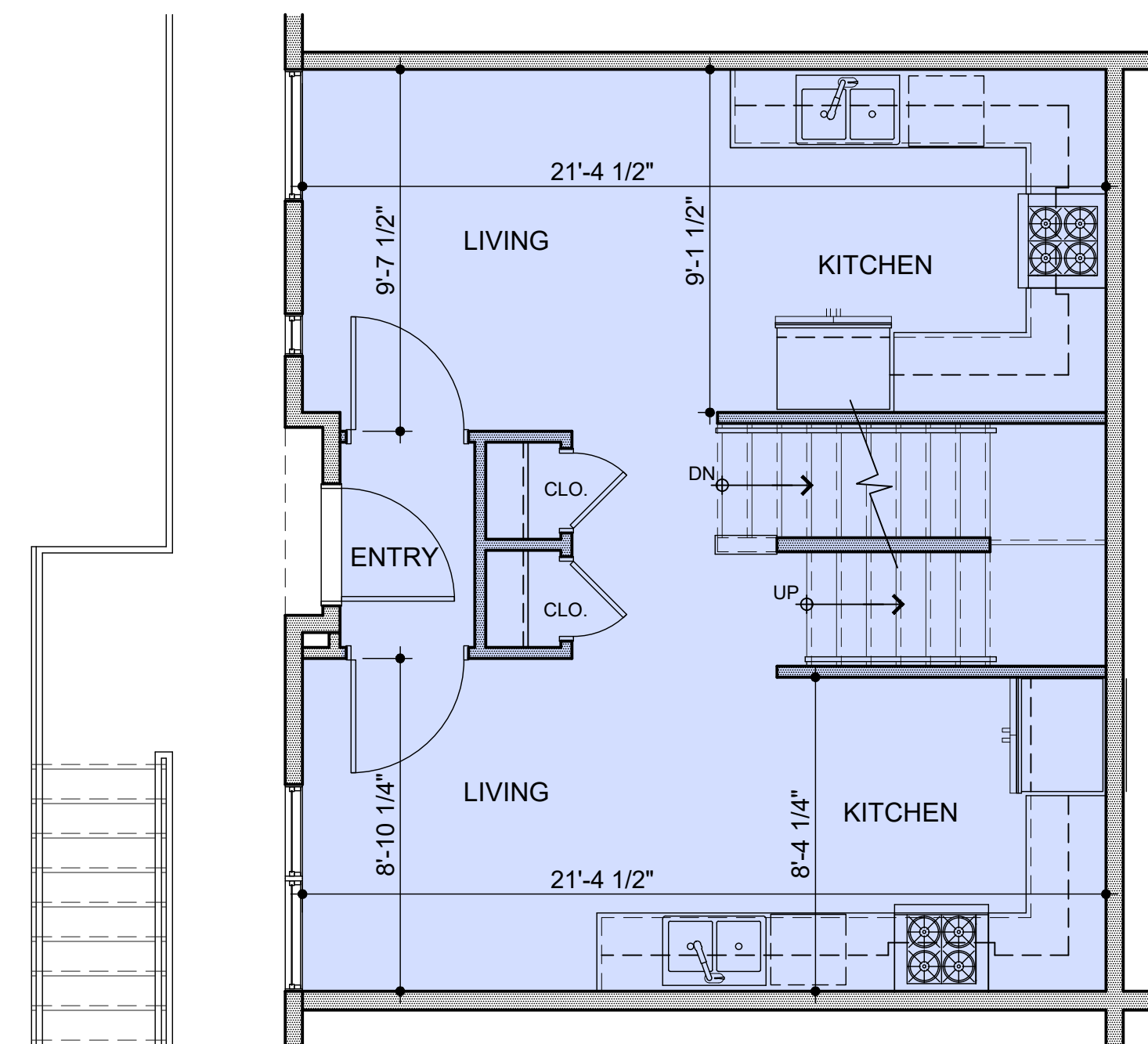
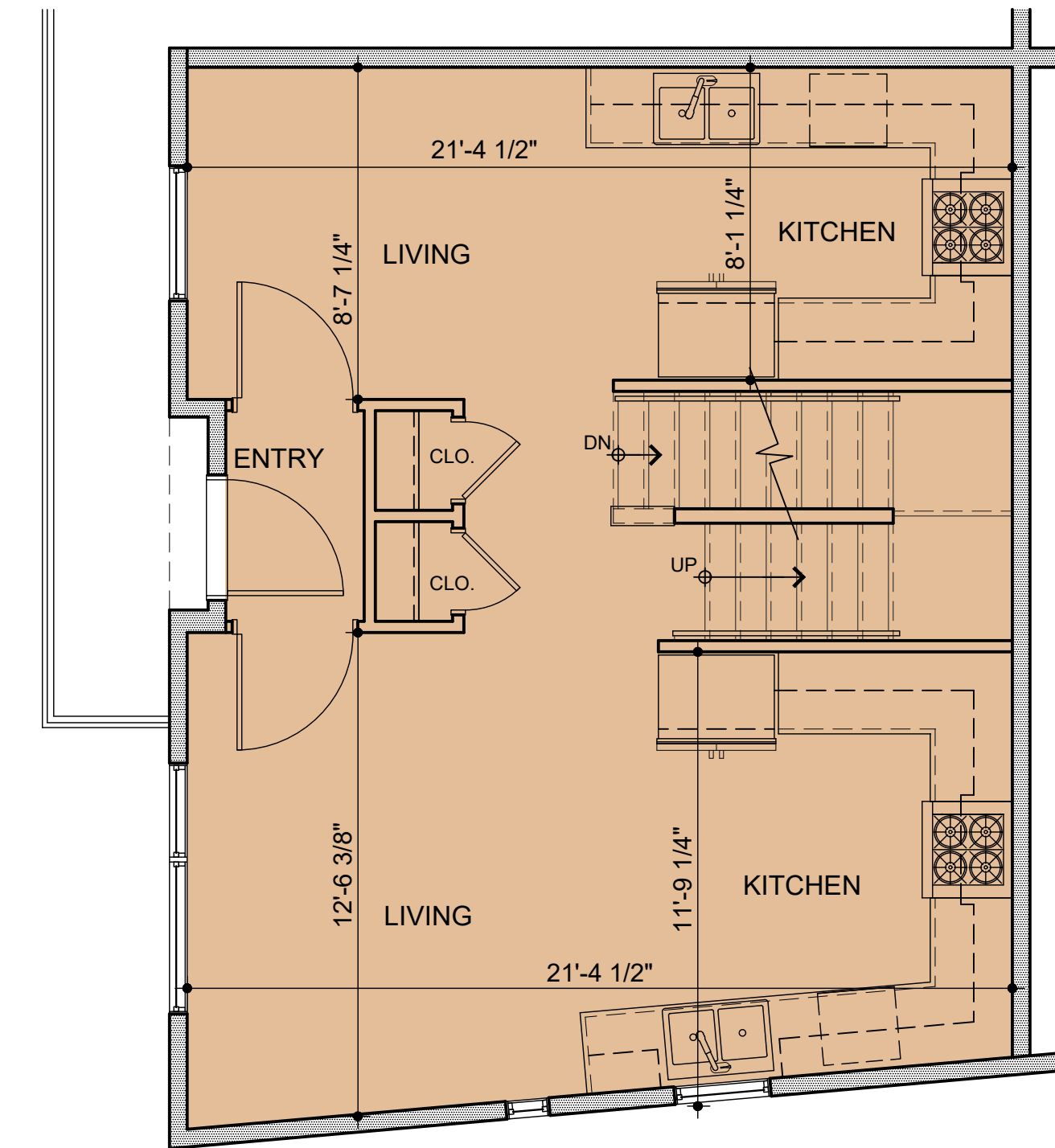
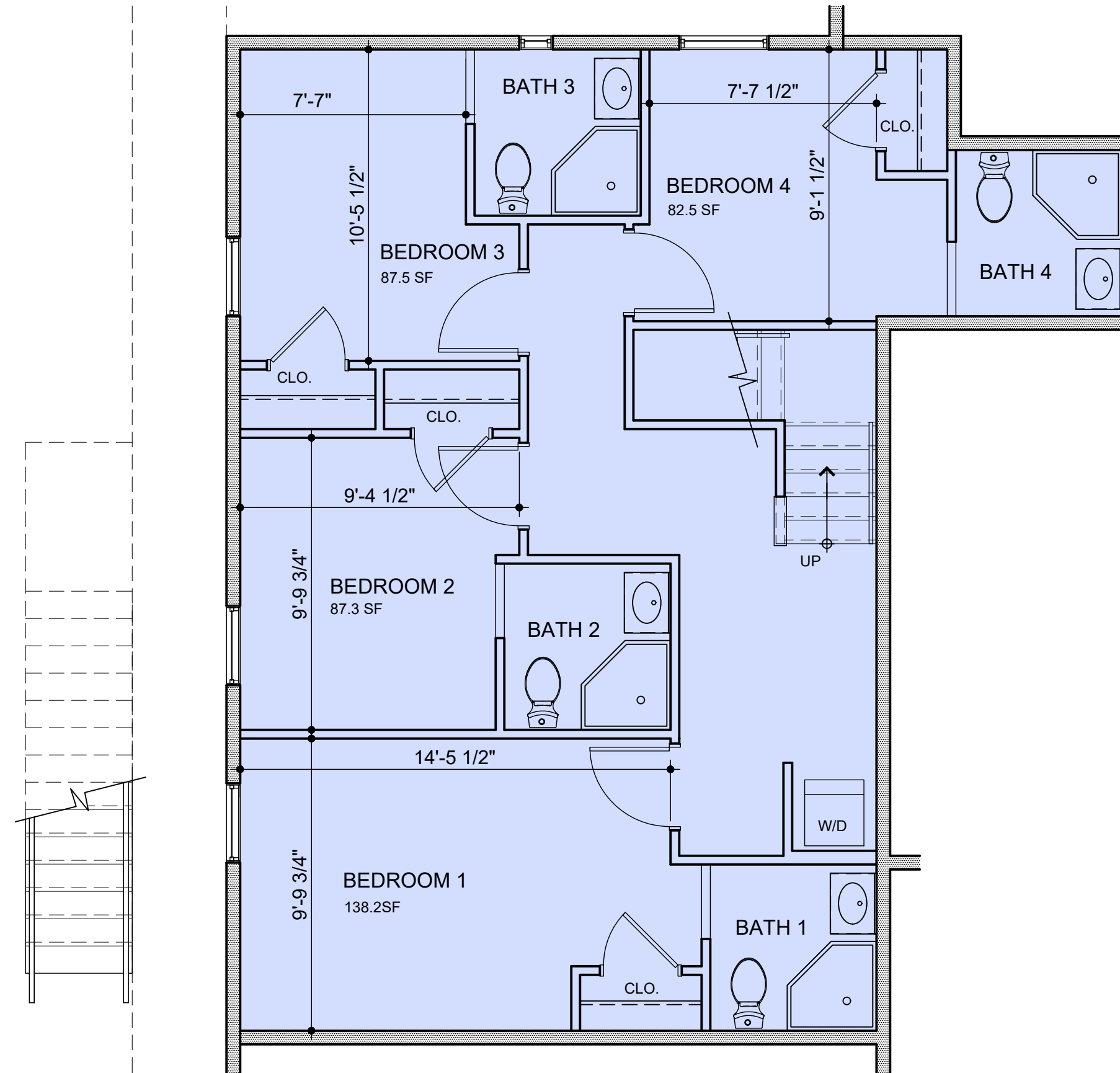
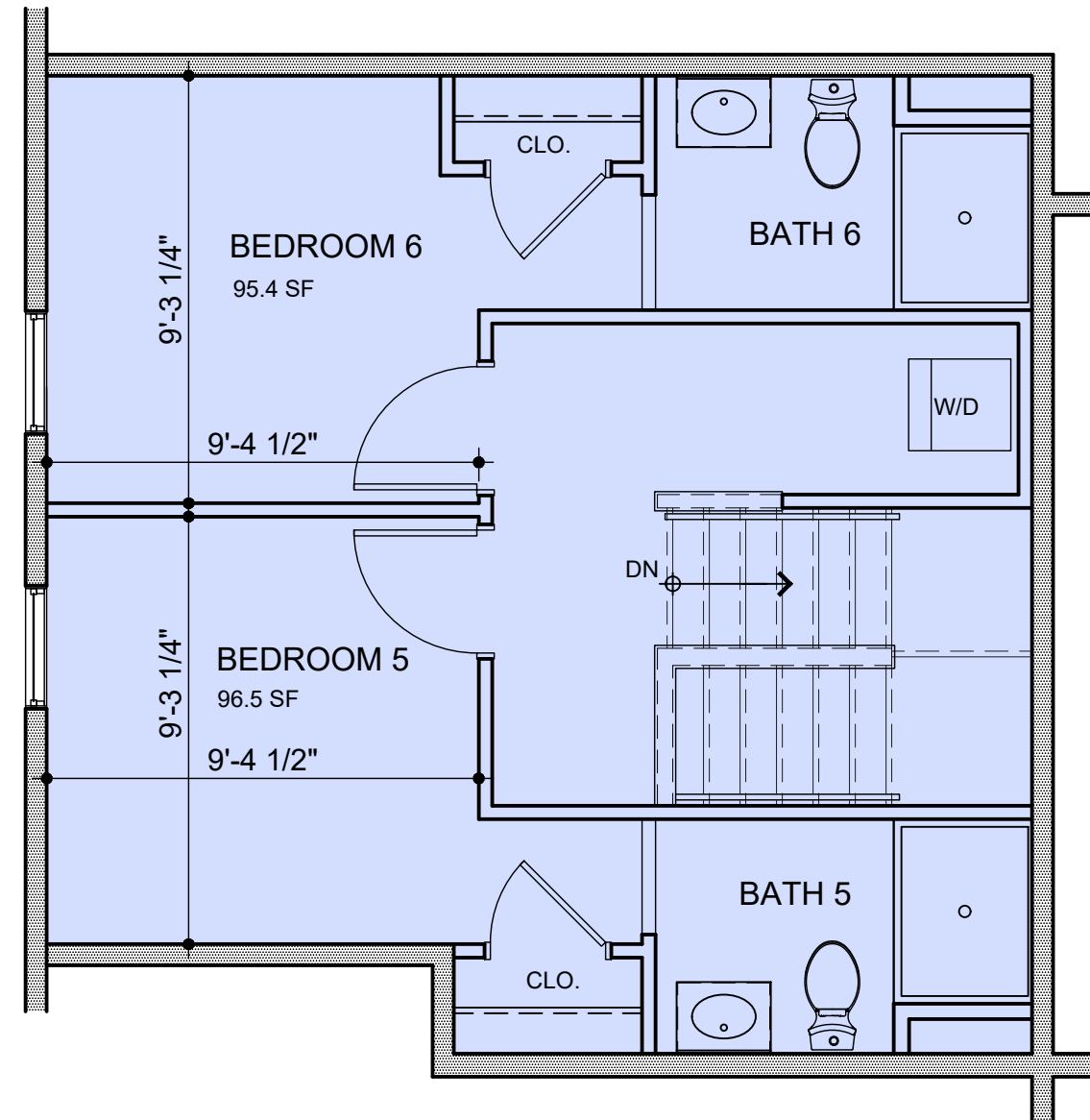
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2	PC	ALT PROPOSAL OPTIONS	7-20-20	
1	PC	CITY REVIEW COMMENTS	6-5-20	
NO	BY	REVISION	PER	DATE

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DRAWN BY: PC
CHECKED BY:
SCALE: AS NOTED
JOB NO. 18-434
DATE: 4-10-20
SHEET NO. C9C

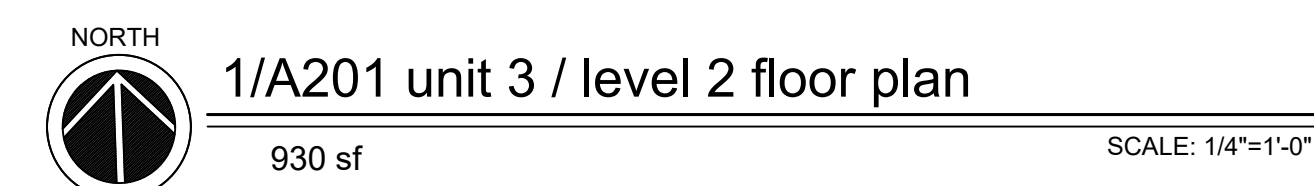
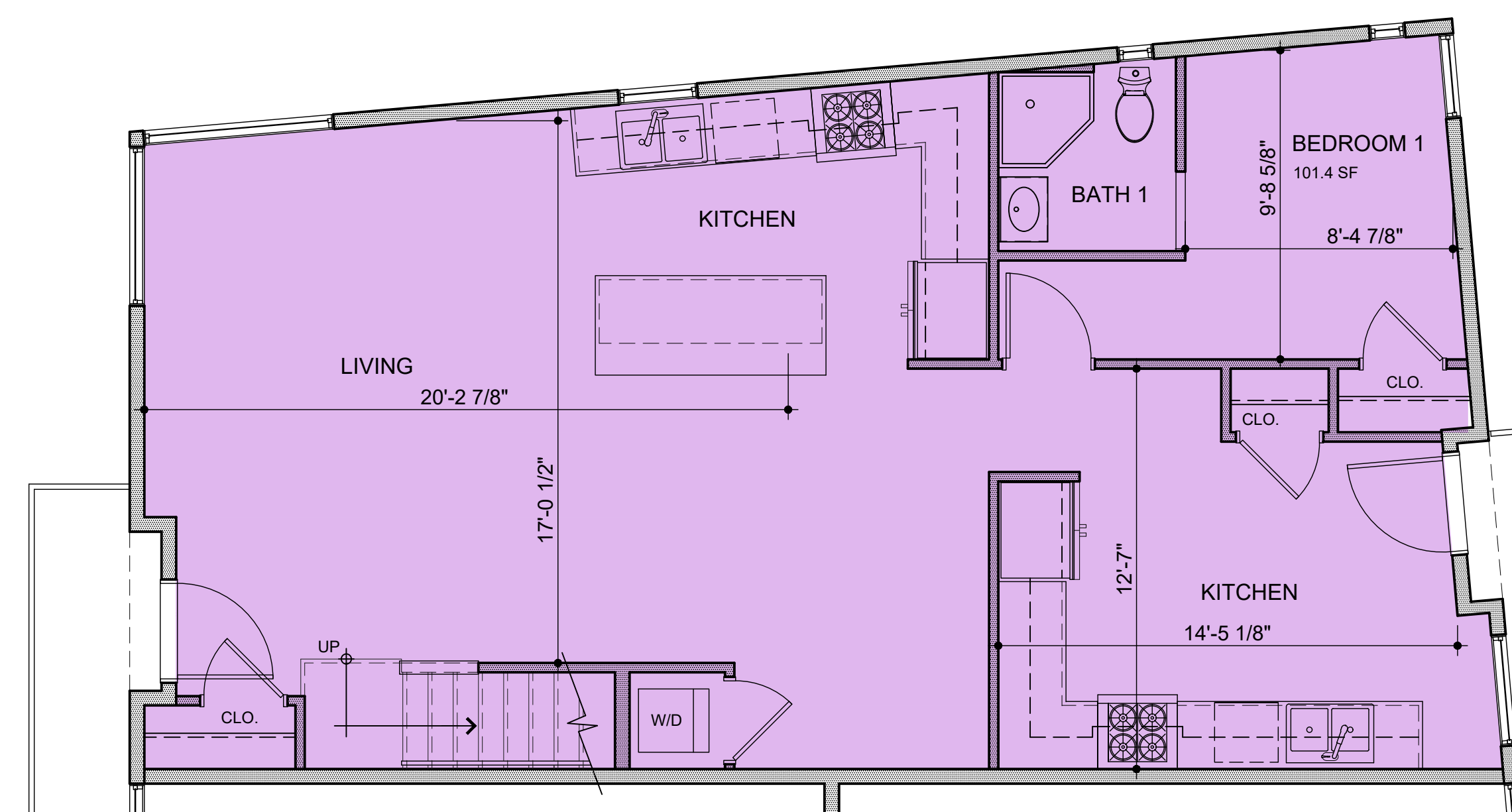
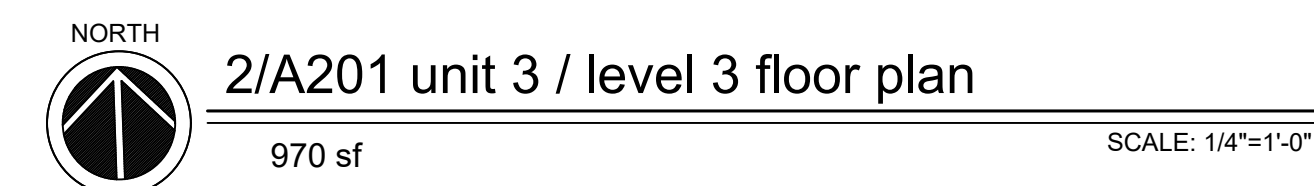
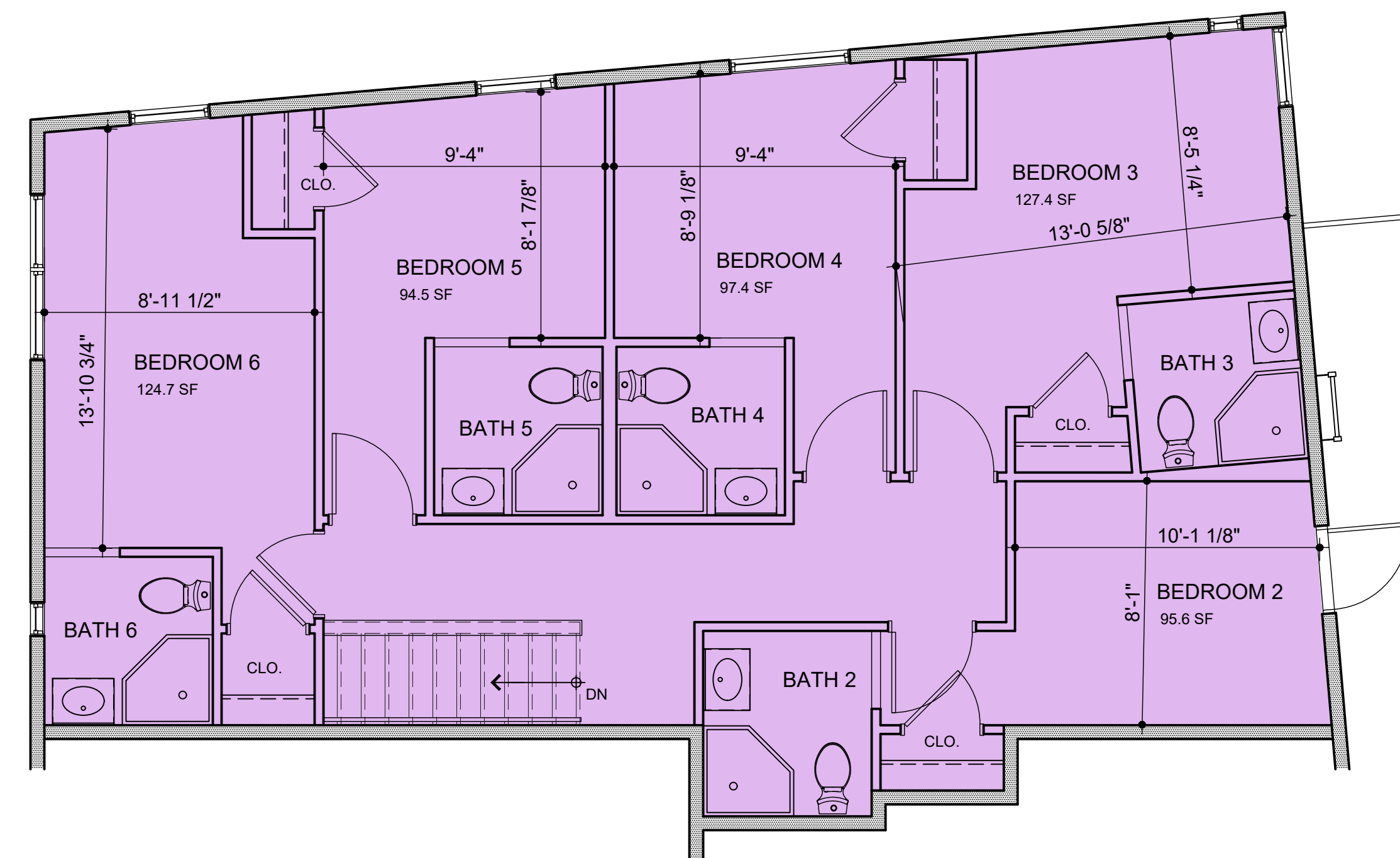
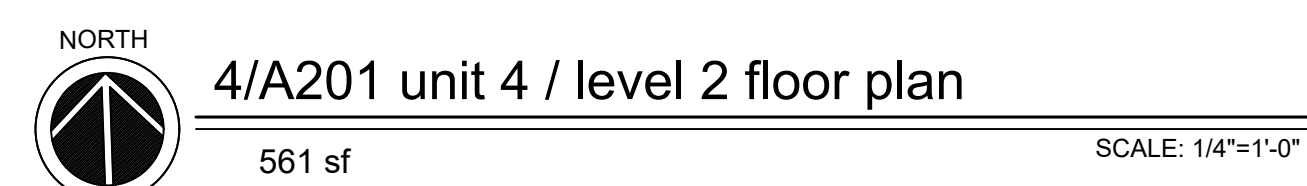
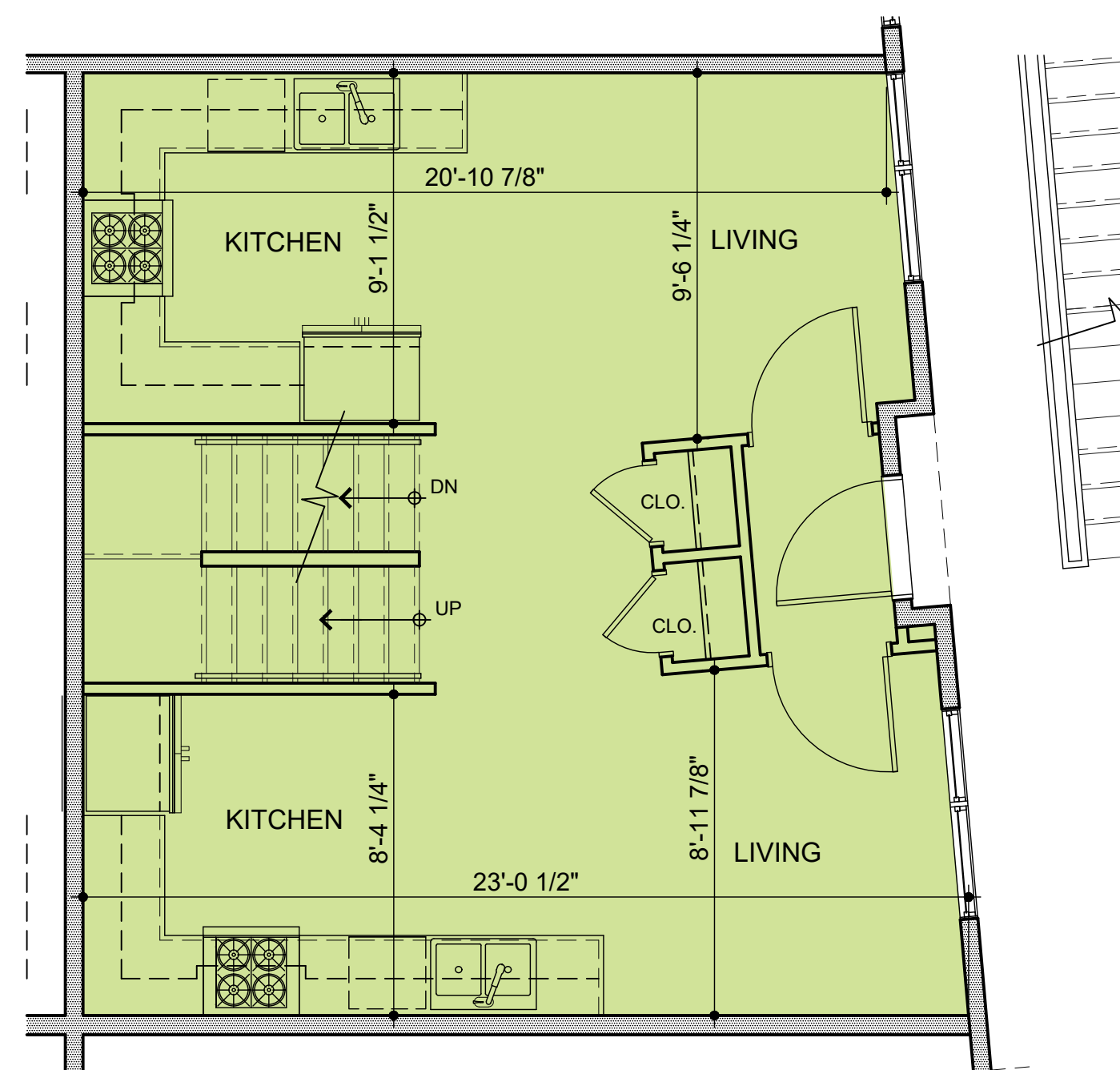
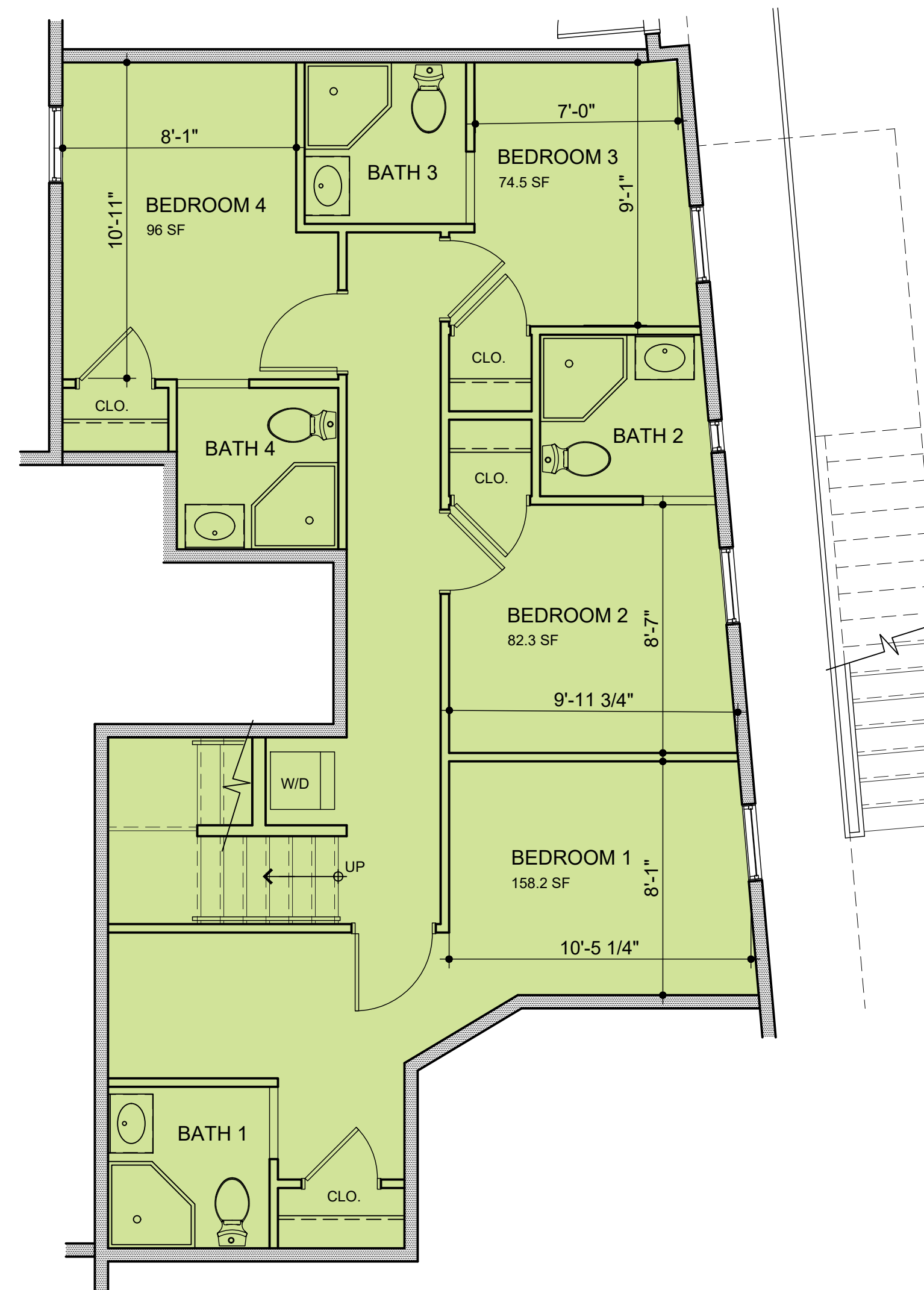
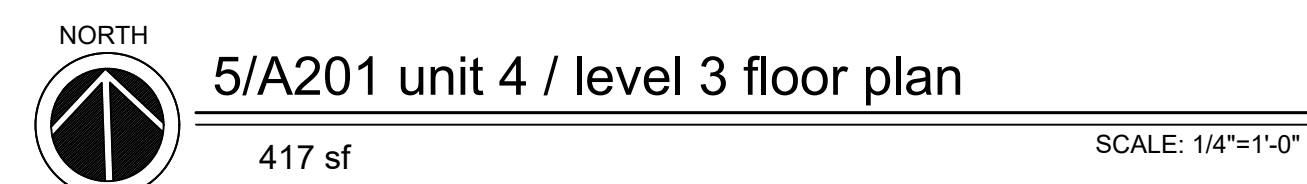
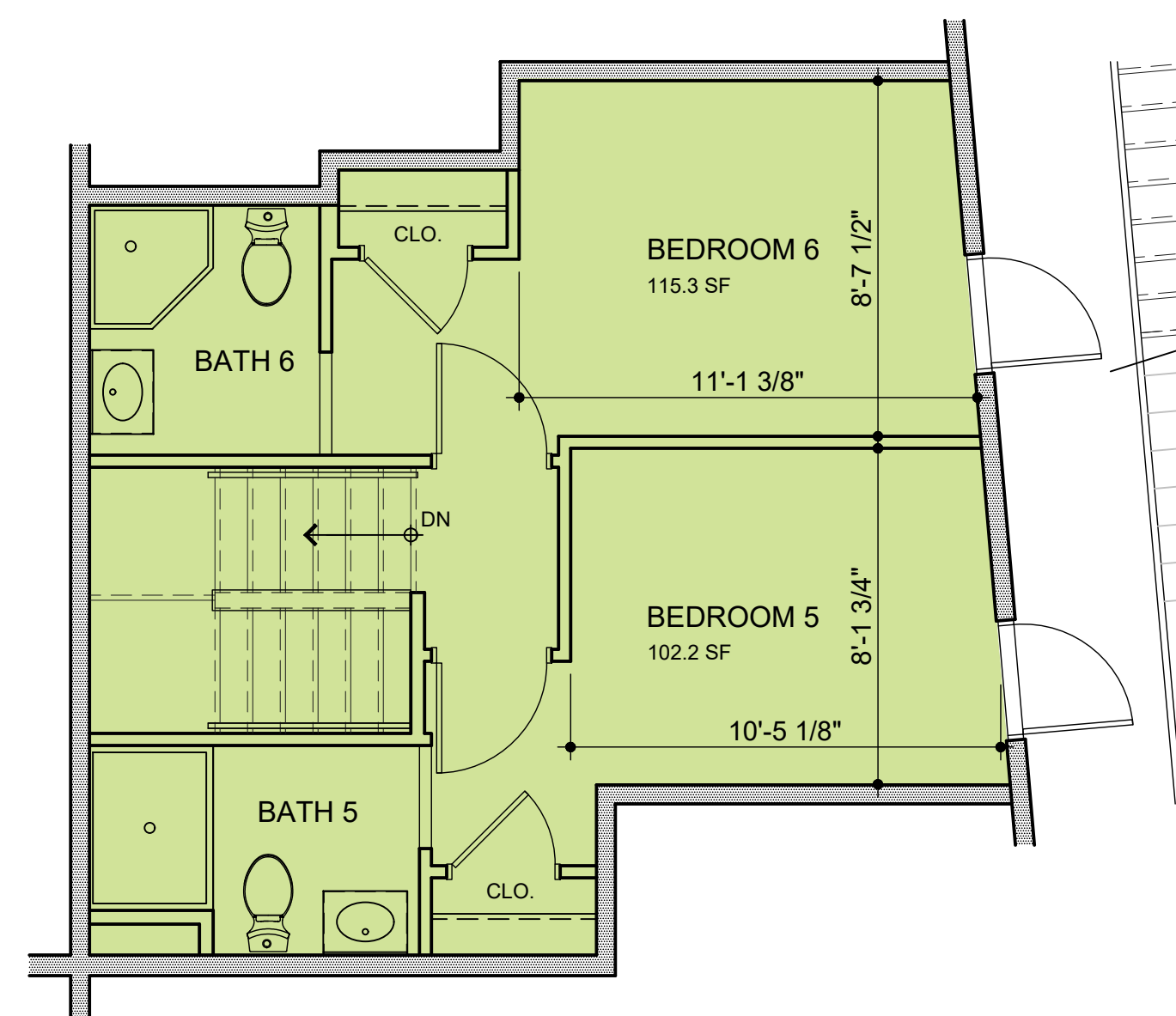
BEBOSS
Engineering



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SITE PLAN SUBMITTAL 2	06/10/20
SITE PLAN SUBMITTAL 1	04/10/20
PRE-SUBMISSION MEETING 2	03/17/20
PRE-SUBMISSION MEETING 1	12/17/19
CONCEPT SITE PLAN	10/13/18
DESCRIPTION	DATE



SITE PLAN SUBMITTAL 3	09/23/20
SITE PLAN SUBMITTAL 2	06/10/20
SITE PLAN SUBMITTAL 1	04/10/20
PRE-SUBMISSION MEETING 2	03/17/20
PRE-SUBMISSION MEETING 1	12/17/19
CONCEPT SITE PLAN	10/13/18
DESCRIPTION	DATE



PROJECT:

**Main + Davis
Apartments**
Multi-Family Residential

07/913 S. Main Street
Ann Arbor, MI 48104

CLIENT:

Nest Capital
Management, LLC

393 W. Broadway, Ste. 3WB
New York, NY 10012

SITE PLAN SUBMITTAL 3	09/23/20
SITE PLAN SUBMITTAL 2	06/10/20
SITE PLAN SUBMITTAL 1	04/10/20
PRE-SUBMISSION MEETING 2	03/17/20
PRE-SUBMISSION MEETING 1	12/17/19
CONCEPT SITE PLAN	10/13/18
DESCRIPTION	DATE

SHEET TITLE:

ENLARGED FLOOR
PLANS - UNITS 3 & 4

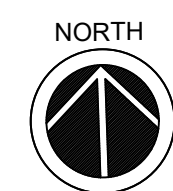
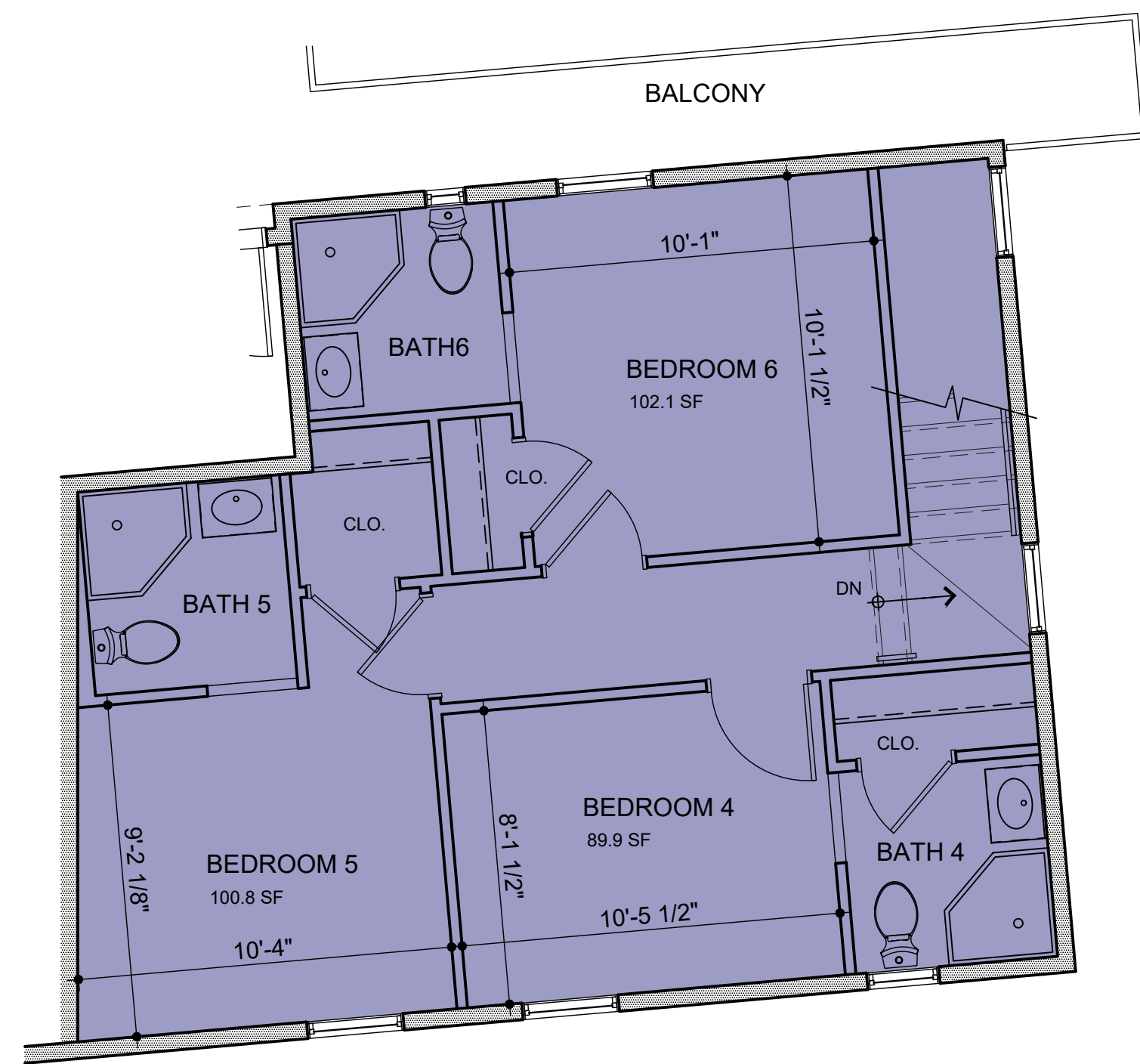
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2018-140

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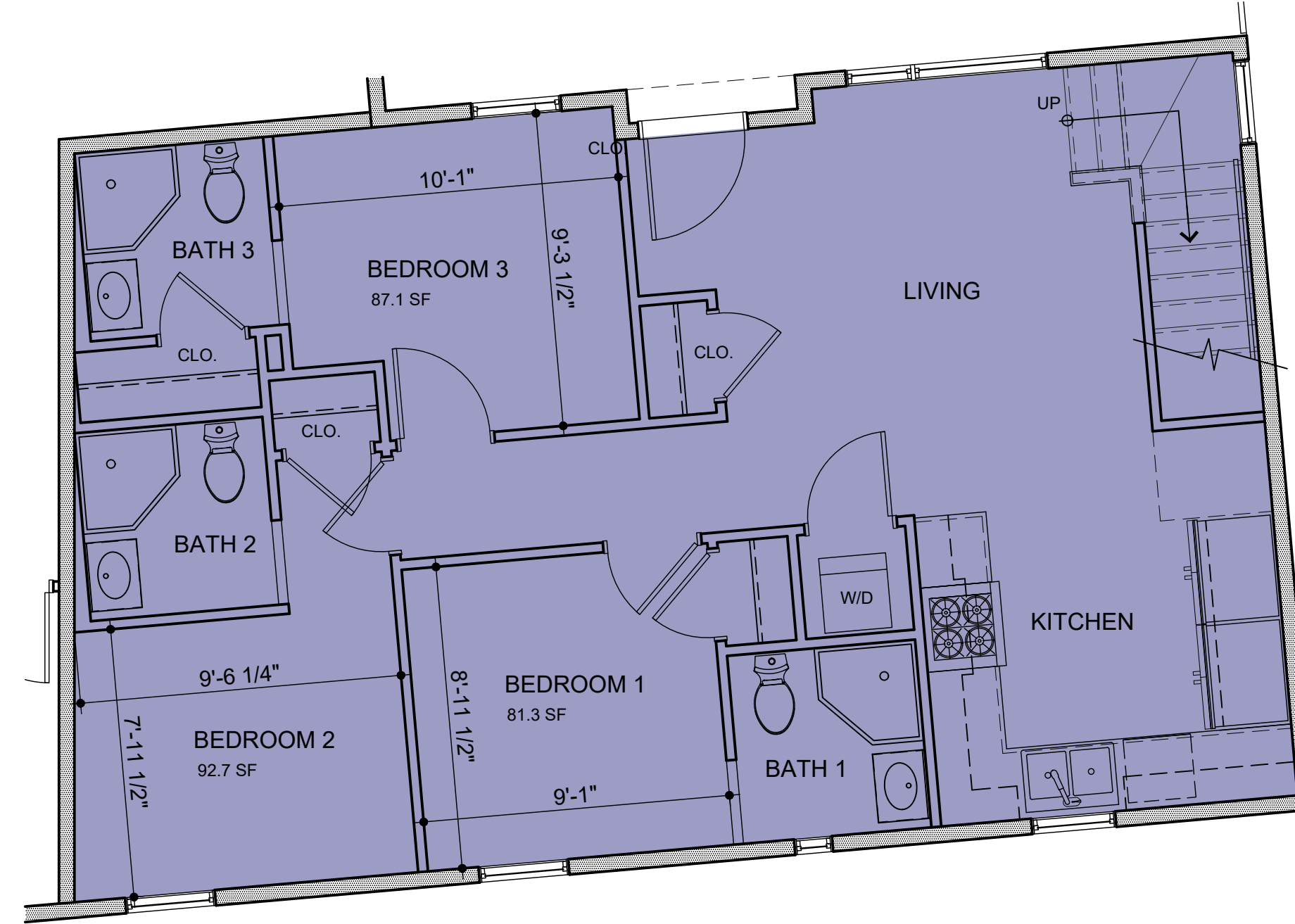
A201



5/A202 unit 6 / level 2 floor plan

572.5 sf

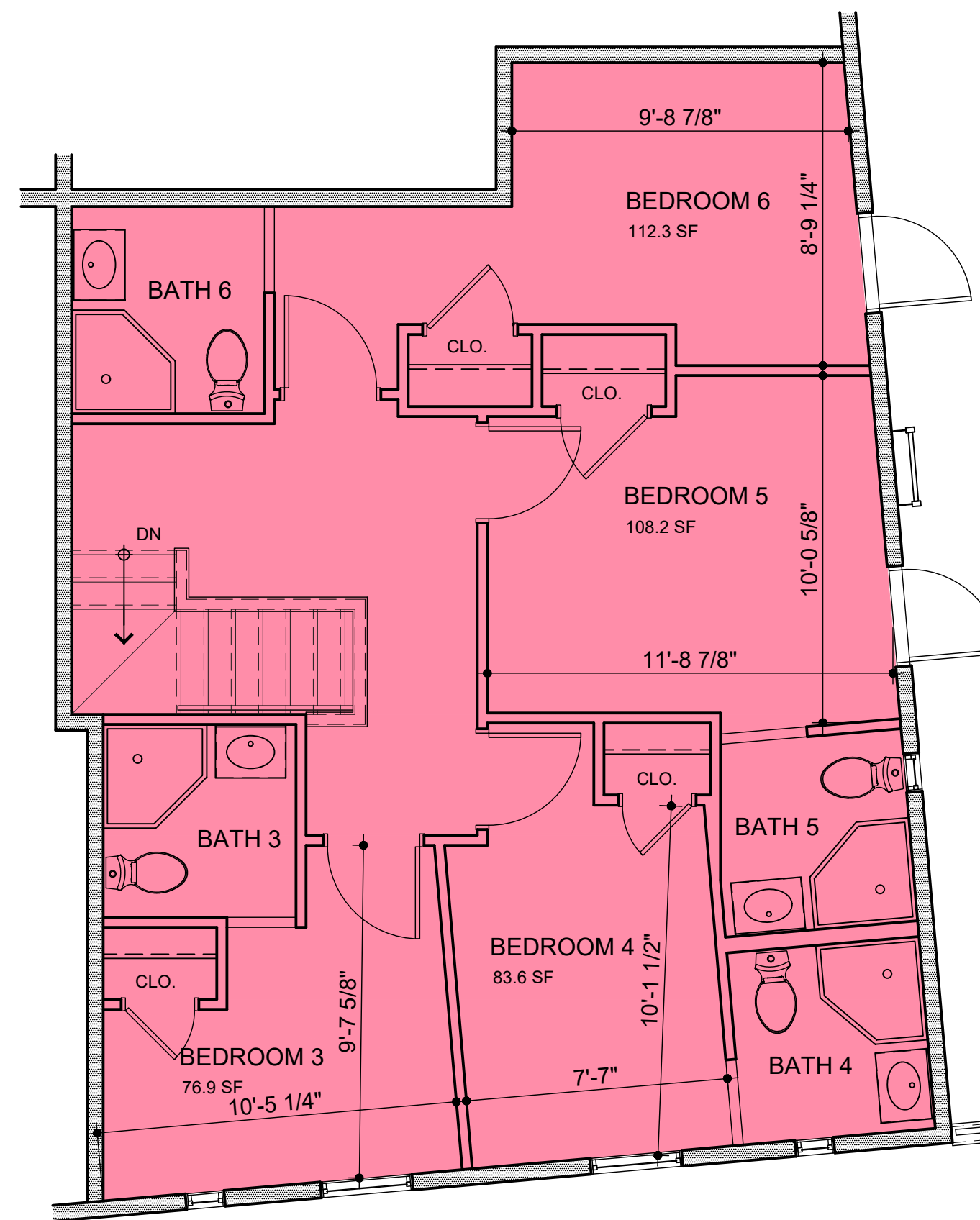
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4/A202 unit 6 / level 1 floor plan

822 sf

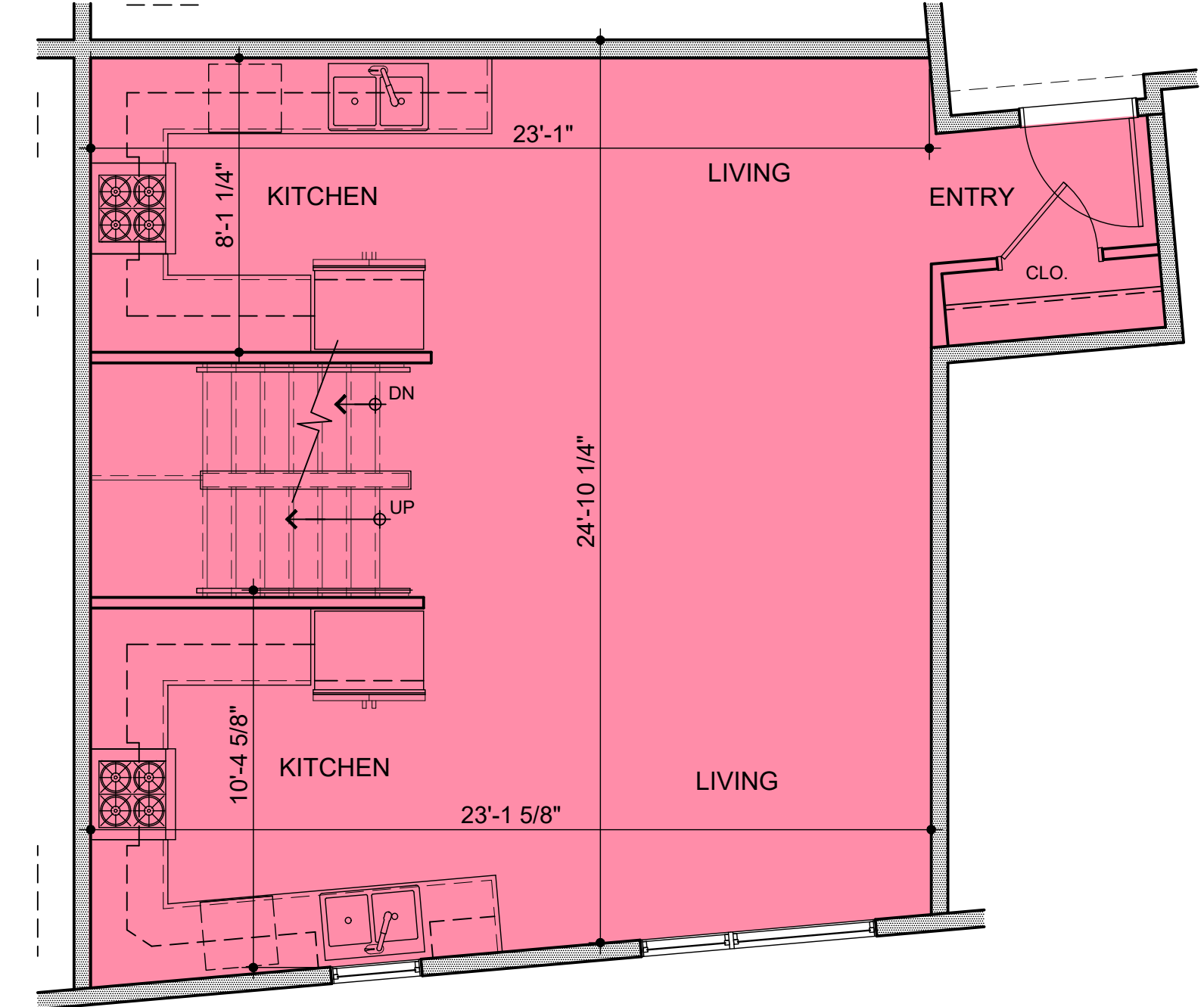
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3/A202 unit 5 / level 3 floor plan

729.5 sf

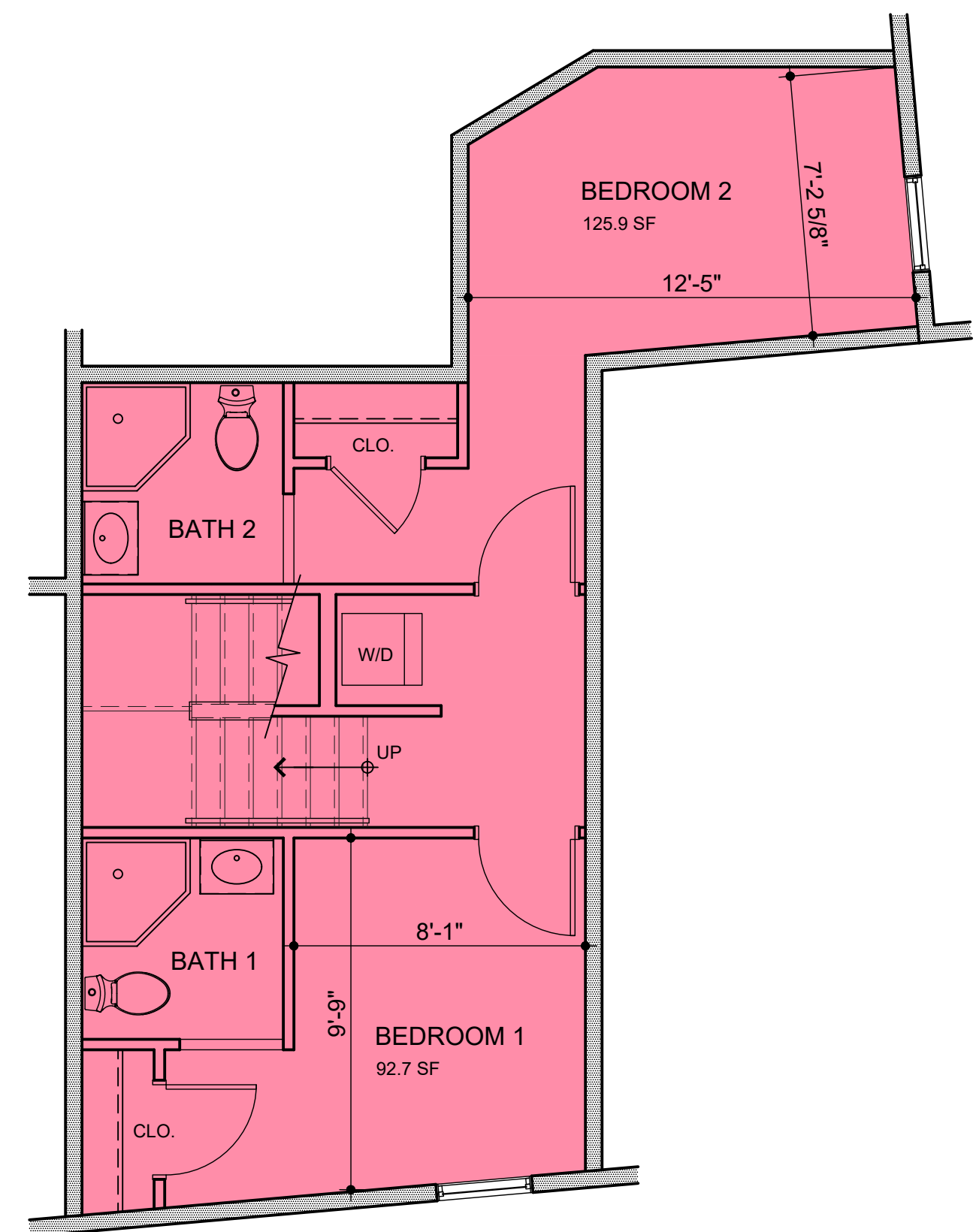
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2/A202 unit 5 / level 2 floor plan

639 sf

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



1/A202 unit 5 / level 1 floor plan

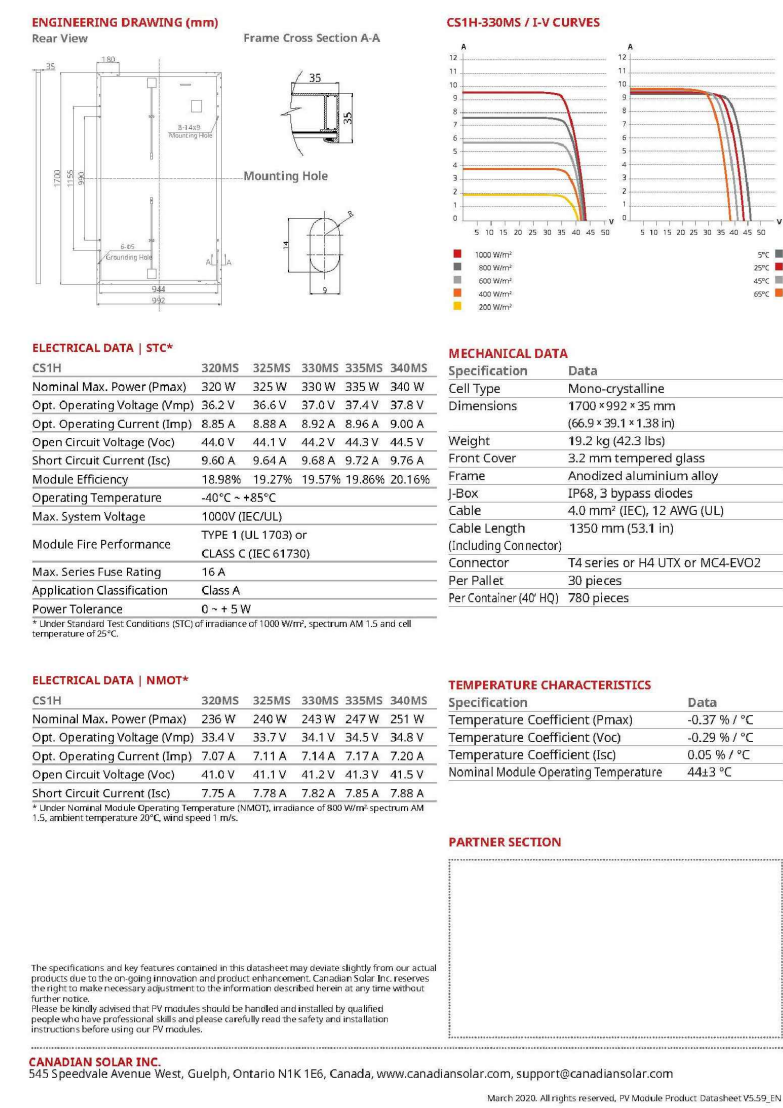
435 sf

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

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SITE PLAN SUBMITTAL 2	06/10/20
SITE PLAN SUBMITTAL 1	04/10/20
PRE-SUBMISSION MEETING 2	03/17/20
PRE-SUBMISSION MEETING 1	12/17/19
CONCEPT SITE PLAN	10/13/18
DESCRIPTION	DATE

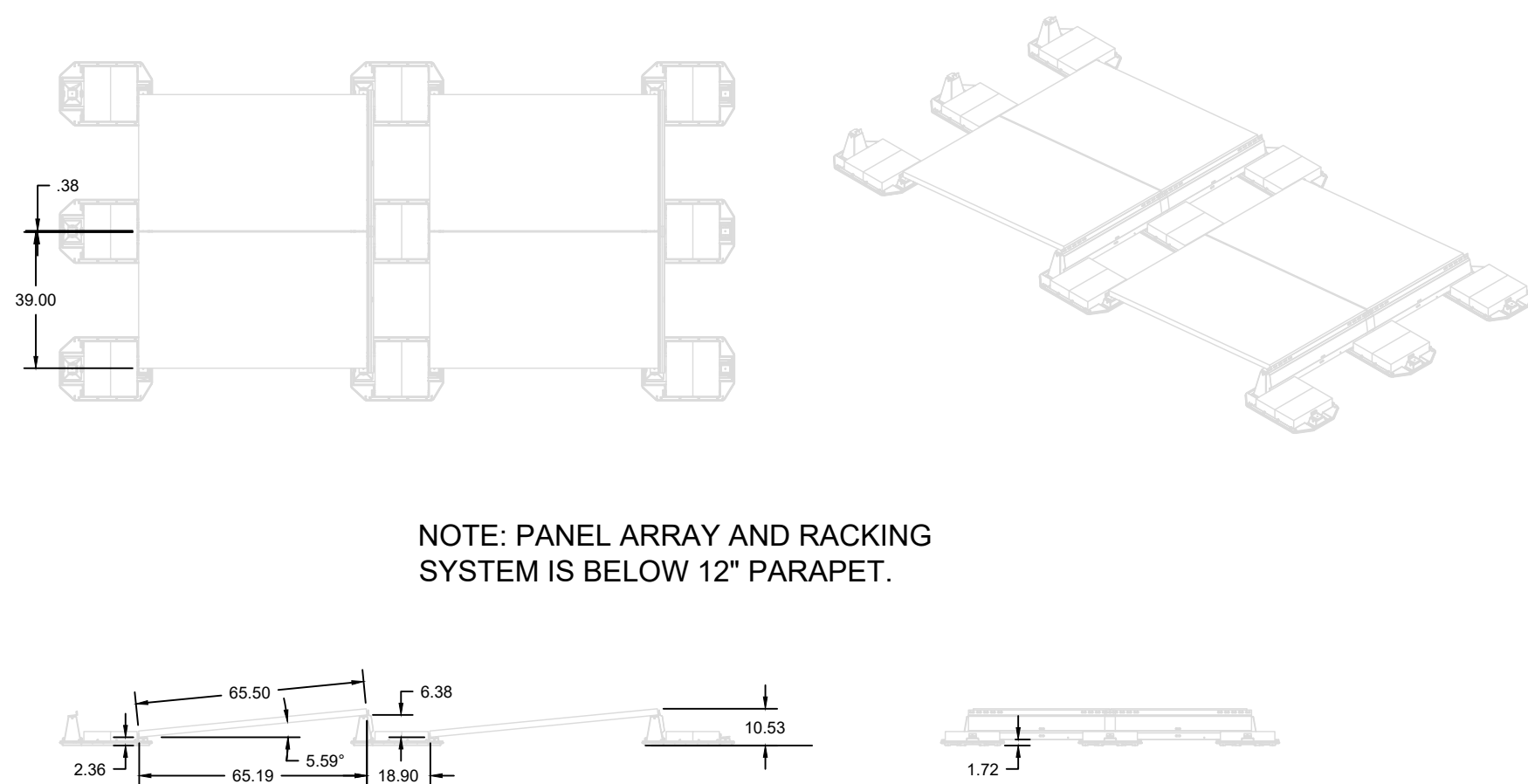
4/A203 solar panel sample image

SCALE: NONE



3/A203 solar panel and racking system product specifications

SCALE: NONE



60 CELL MODULE

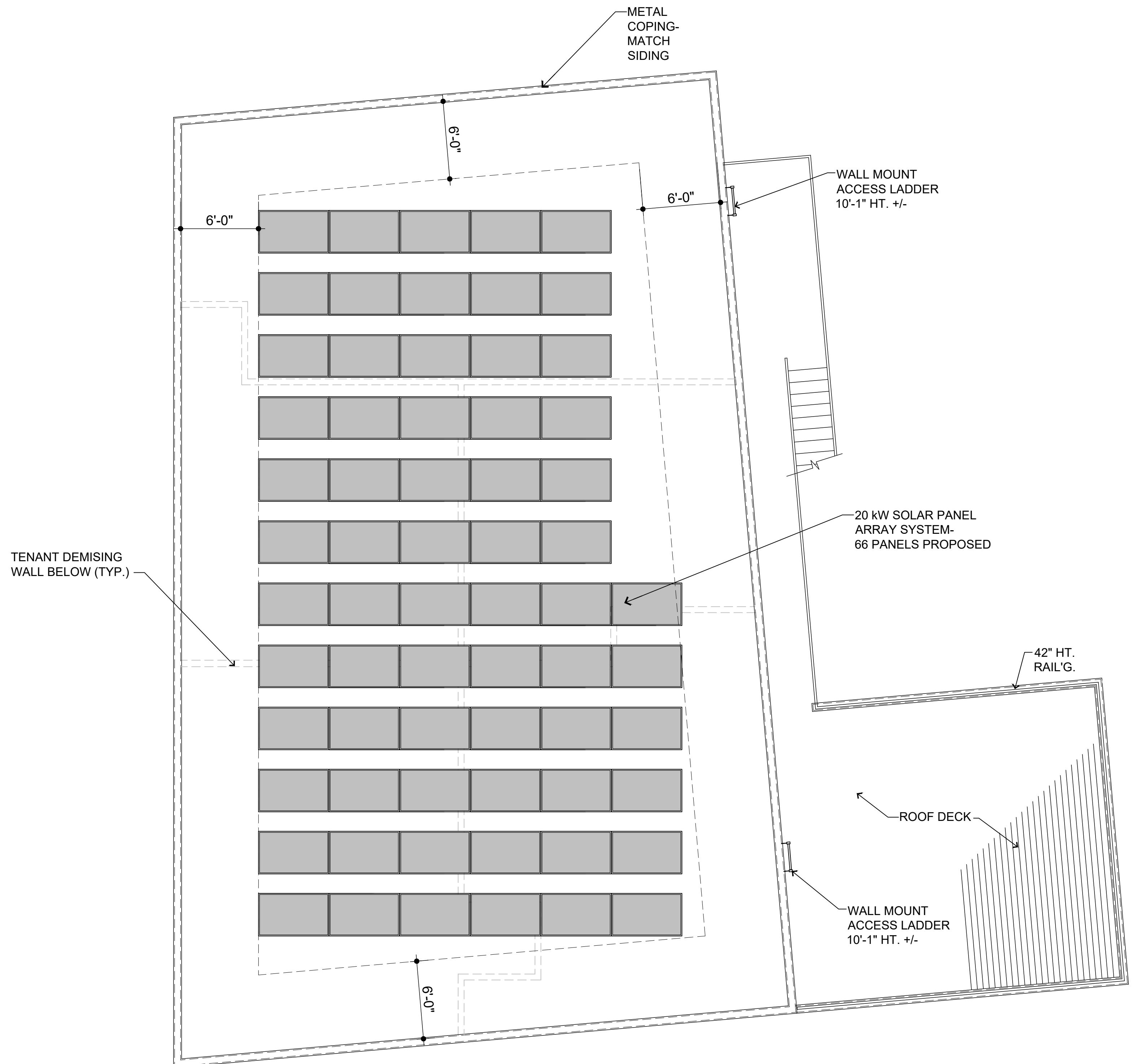
ECOFOOT2 PORTRAIT ELEVATION/ISO VIEWS

SCALE: NTS

UNITS: INCHES

2/A203 solar array details

SCALE: NONE



1/A203 roof plan

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

PROJECT:

Main + Davis
Apartments
Multi-Family Residential

7/913 S. Main Street
Ann Arbor, MI 48104

CLIENT:

Nest Capital
Management, LLC

393 W. Broadway, Ste. 3WB
New York, NY 10012

SITE PLAN SUBMITTAL 3	09/23/20
SITE PLAN SUBMITTAL 2	06/10/20
SITE PLAN SUBMITTAL 1	04/10/20
PRE-SUBMISSION MEETING 2	03/17/20
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CONCEPT SITE PLAN	10/13/18
DESCRIPTION	DATE

SHEET TITLE:

ROOF PLAN

PROJECT NUMBER:
2018-140

DRAWN BY:
KMB

CHECKED BY:
KMB

SHEET NUMBER:

A203



BUILDING HEIGHT CALCULATION

AVERAGE FINISHED GRADE = 857.65
AVERAGE BUILDING ELEVATION:
 $891.75 + 882.08 / 2 = 886.91$
BUILDING HEIGHT:
 $886.91 - 857.65 = 29.26'$

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Bmk DESIGN + PLANNING, LLC
122 S Laurel Street - Royal Oak - Michigan - 48067
Ph 248.303.1446
kmb@bmkdp.com

PROJECT:

Main + Davis
Apartments
Multi-Family Residential

907/913 S. Main Street
Ann Arbor, MI 48104

CLIENT:

Nest Capital
Management, LLC

393 W. Broadway, Ste. 3WB
New York, NY 10012

SITE PLAN SUBMITTAL 3	09/23/20
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PRE-SUBMISSION MEETING 2	03/17/20
PRE-SUBMISSION MEETING 1	12/17/19
CONCEPT SITE PLAN	10/13/18
DESCRIPTION	DATE



1/A300 main street (west) exterior elevation

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

SHEET TITLE:
EXTERIOR
ELEVATIONS -
SOUTH & WEST

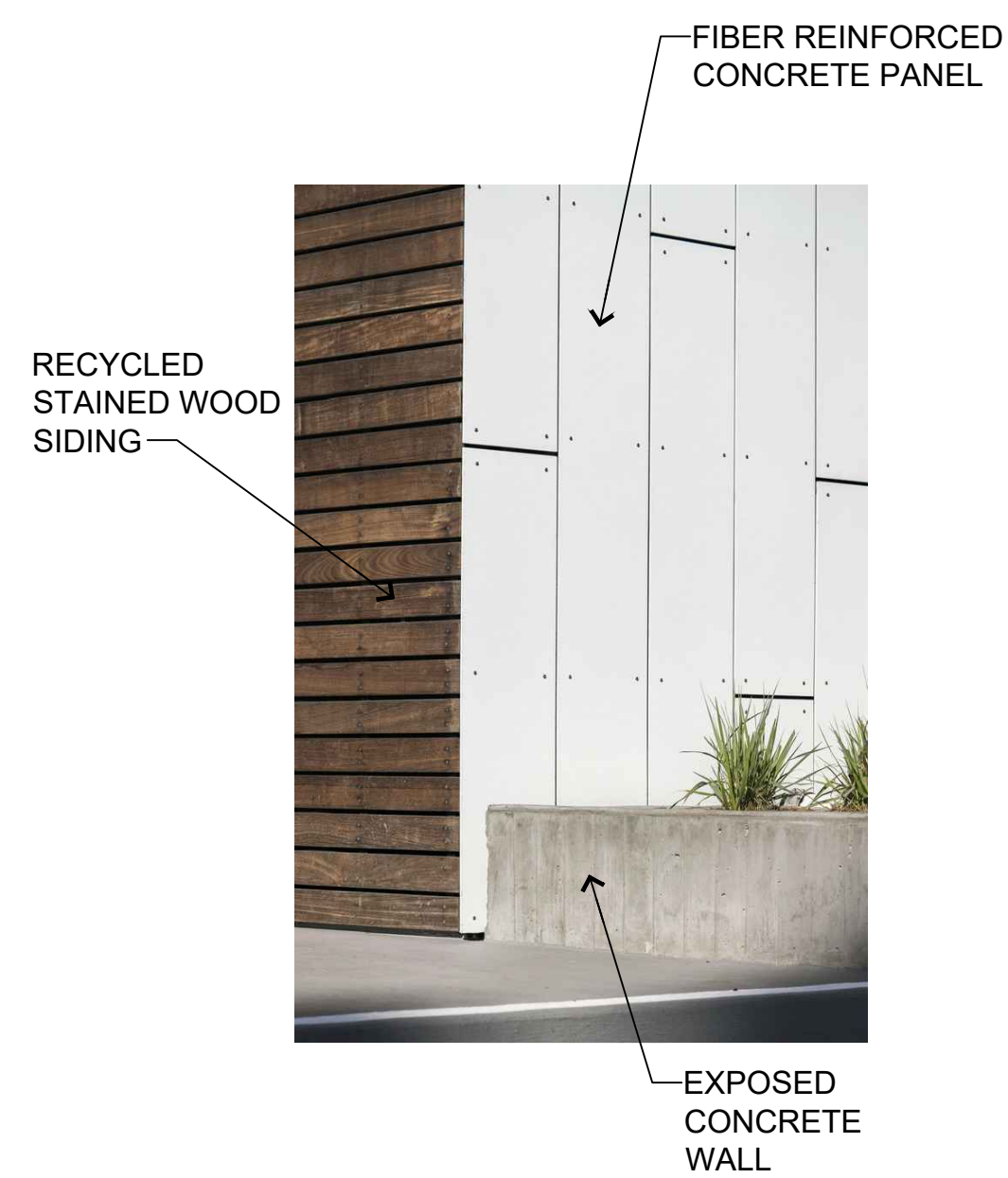
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2018-140

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KMB

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KMB

SHEET NUMBER:

A300



EXTERIOR MATERIAL SAMPLING



BUILDING HEIGHT CALCULATION

AVERAGE FINISHED GRADE = 857.65
AVERAGE BUILDING ELEVATION:
 $891.75 + 882.08 / 2 = 886.91$
BUILDING HEIGHT:
 $886.91 - 857.65 = 29.26'$

AVERAGE BUILDING ELEVATION:

$$891.75 + 882.08 / 2 = 886.91$$

BUILDING HEIGHT:

$$886.91 - 857.65 = 29.26'$$

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BmK 
DESIGN+PLANNING

Bmk DESIGN + PLANNING, LLC
122 S Laurel Street - Royal Oak - Michigan - 48067
Ph 248.303.1446
kmb@bmkdp.com

PROJECT:

Main + Davis
Apartments
Multi-Family Residential

Multi-Family Residential

907/913 S. Main Street
Ann Arbor, MI 48104

Ann Arbor, MI 48104

CLIENT:

Nest Capital
Management, LLC

393 W. Broadway, Ste. 3WB
New York, NY 10012

New York, NY 10012

SITE PLAN SUBMITTAL 3	09/23/20
SITE PLAN SUBMITTAL 2	06/10/20
SITE PLAN SUBMITTAL 1	04/10/20
PRE-SUBMISSION MEETING 2	03/17/20
PRE-SUBMISSION MEETING 1	12/17/19
CONCEPT SITE PLAN	10/13/18
DESCRIPTION	DATE

SHEET TITLE:

EXTERIOR
ELEVATIONS -
SOUTH & WEST

DRAWN BY:

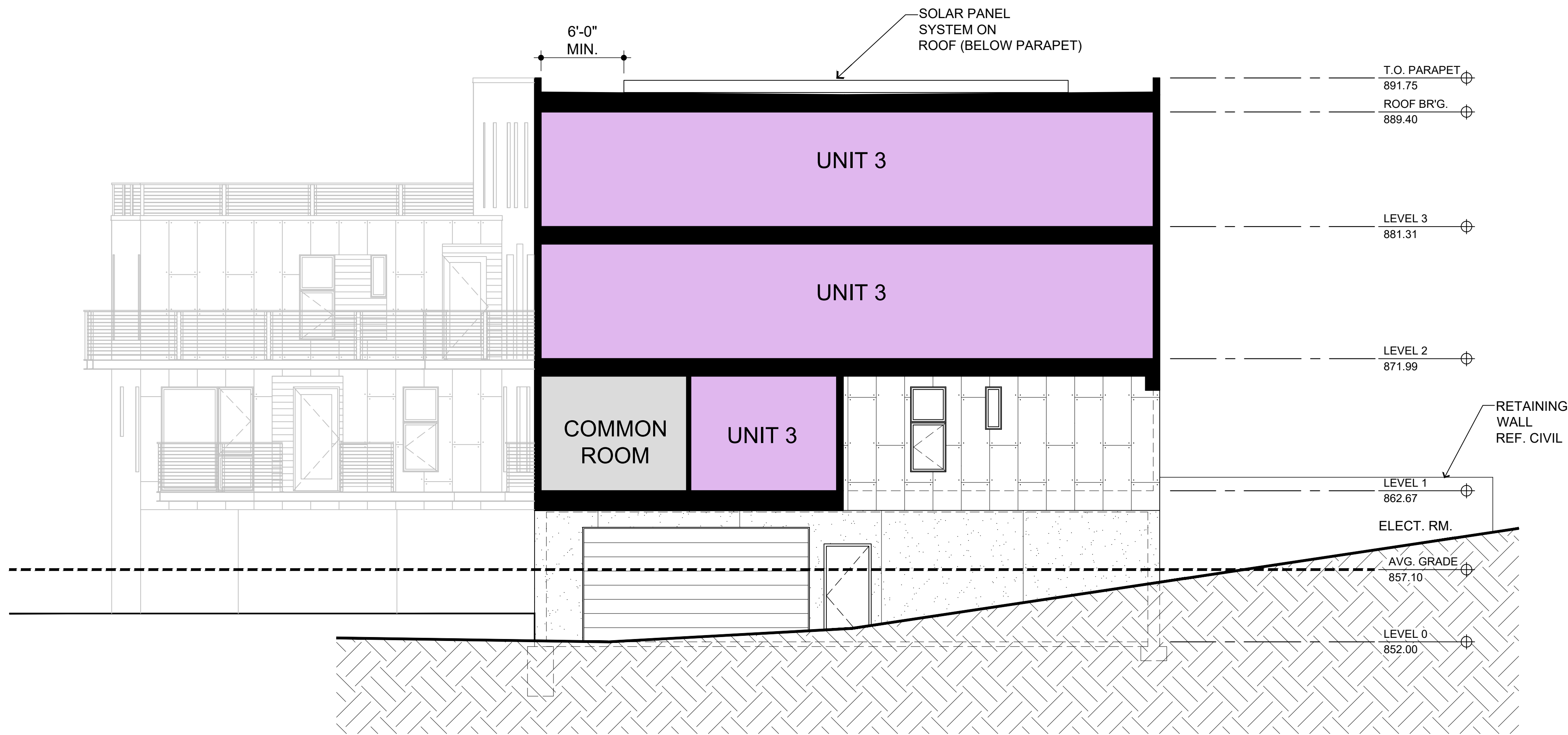
KMB

CHECKED BY:

KMB

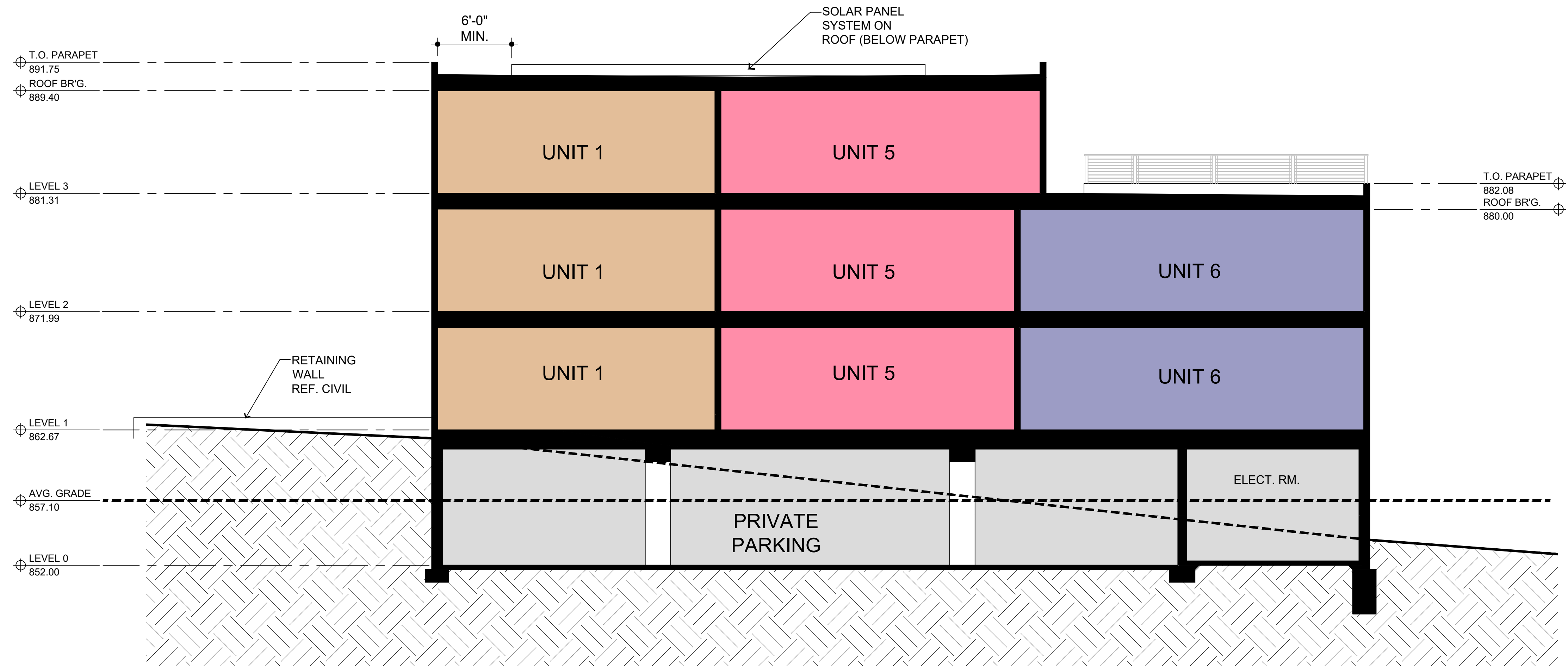
SHEET NUMBER:

A301



2/A500 east-west section looking south

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



1/A500 east-west section looking north

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

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PROJECT:

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Apartments

Multi-Family Residential

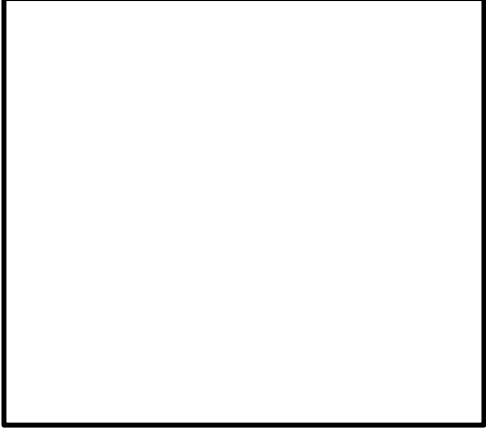
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CONCEPT SITE PLAN	10/13/18
DESCRIPTION	DATE



SHEET TITLE:

BUILDING
SECTION

PROJECT NUMBER:

2018-140

DRAWN BY:

KMB

CHECKED BY:

KMB

SHEET NUMBER:

A500

DWELLING UNIT
ENTRY LIGHTS

CLASS A
WALLRACK
QUANTITY: 8

TENANT MAILBOX
SAMPLE

1/A501 enlarged trash/bicycle area

A501